

## SEQUENCE LISTING

<110> Xu, Jiangchun Dillon, Davin C. Mitcham, Jennifer L. Harlocker, Susan L. Jiang, Yuqui Henderson, Robert A. Kalos, Michael D. Fanger, Gary R. Retter, Marc W. Stolk, John A. Day, Craig H. Vedvick, Thomas S. Carter, Darrick Li, Samuel Wang, Aijun Skeiky, Yasir A.W. Hepler, William

<120> COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF PROSTATE CANCER

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gagcctctgt tagtggagga agattccggg cttcagctaa gtagtcagcg tatgtcccat aagcaaacac tgtgagcagc cggaaggtag aggcaaagtc acttcagcc agctctctaa cattgggcat gtccagcagt tctccaaaca cgtagacacc agnggcctcc agcacctgat ggatgagtgt ggccagcgct gcccccttgg ccgacttggc taggagcaga aattgctcct ggttctgcc tgtcaccttc acttccgcac tcatcactgc actgagtgtg ggggacttgg gccaggatg tccagagacg tggttccgcc ccctcnctta atgacaccgn ccanncaacc gtcggctccc gccgantgng ttcgtcgtnc ctgggtcagg gtctgctggc cnctacttgc aancttcgtc nggcccatgg aattcaccnc accggaactn gtangatcca ctnnttctat aaccggncgc caccgcnnnt ggaactccac tcttntncc tttacttgag ggttaaggtc acccttnncg ttaccttggt ccaaaccntn ccntgtgtcg anatngtnaa tcnggnccna tnccanccnc atangaagcc ng	240 300 360 420 480 540 600 660 720 780 802
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caggaaccaa gancaaanne tgeteennte caagteggen nagggggegg ggetggecae geneateent enagtgetgn aaageeeenn eetgtetaet tgtttggaga aengennnga	240 300
catgcccagn gttanataac nggcngagag tnantttgcc tctcccttcc ggctgcgcan	360
cgngtntgct tagnggacat aacctgacta cttaactgaa cccnngaatc tnccncccct ccactaagct cagaacaaaa aacttcgaca ccactcantt gtcacctgnc tgctcaagta	420 480
aagtgtaccc catnoccaat gtntgctnga ngctctgncc tgcnttangt tcggtcctgg gaagacctat caattnaagc tatgtttctg actgcctctt gctccctgna acaancnacc	540 600
ennennteca aggggggne ggeececaat ecceecaace ntnaattnan tttaneecen	660 720
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annttaaatt aaatnttnnt tggnggnnna anccnaatgt nangaaagtt naacccanta	180 240
tnancttnaa tncctggaaa cengtngntt ccaaaaatnt ttaaceetta anteceteeg aaatngttna nggaaaacee aanttetent aaggttgttt gaaggntnaa tnaaaaneee	300
nnccaattgt tittngccac gcctgaatta attggnttcc gntgttttcc nttaaaanaa	360

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420
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ganccenegg gaattaacgg ggnnnnteee tnttgggggg enggnneece eccenteggg
                                                                       540
ggttngggnc aggncnnaat tgtttaaggg tccgaaaaat ccctccnaga aaaaaanctc
                                                                       600
ccaggntgag nntngggttt ncccccccc canggcccct ctcgnanagt tggggtttgg
                                                                       660
agggeetagg atttintte ecetnitine tecceecee cenggganag aggitngngt
tttgntcnnc ggccccnccn aaganctttn ccganttnan ttaaatccnt gcctnggcga
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                                                                       754
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nncanatncc actganngcg cgangtngan ngagaaanct nataccanag ncaccanacn
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ccagctgtcc nanaangcct nnnatacngg nnnatccaat ntgnancctc cnaagtattn
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nncnncanat gattttcctn anccgattac centnecece tanecectec eccecaacna
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cqaaqqenet qqncenaaqq nnqeqnenec cegetagnte eeenneaagt eneneneeta
                                                                       420
aactcancen nattacnege ttentgagta teacteeceg aateteacee tacteaacte
                                                                       480
aaaaanatcn gatacaaaat aatncaagcc tgnttatnac actntgactg ggtctctatt
                                                                       540
ttagnggtcc ntnaancntc ctaatacttc cagtctncct tcnccaattt ccnaanggct
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gggctcntct tttccttcgg ttancctggn ttcnnccggc cagttattat ttcccntttt
                                                                       660
                                                                       720
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                                                                       120
atcctgnnna cggaanggtc accggnngat nntgctaggg tgnccnctcc cannnenttn
                                                                       180
                                                                       240
cataacteng nggccctgcc caccacette ggcggcceng ngneegggce egggtcattn
                                                                        300
gnnttaaccn cactnngcna neggttteen neceenneng accenggega teeggggtne
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tctgtcttcc cctgnagncn anaaantggg ccncggnccc ctttacccct nnacaagcca
                                                                        420
engeenteta neenengeee eccetecant nngggggaet geenannget eegttnetng
                                                                        480
nnaccconnn gggtncctcg gttgtcgant cnaccgnang ccanggattc cnaaggaagg
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tgcgttnttg gcccctaccc ttcgctncgg nncacccttc ccgacnanga nccgctcccg
                                                                        600
chennequing cetenceteg caacaceege netentengt neggninece ecceaceege
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nccetenene ngnegnanen eteeneenee gteteannea eeaeeeegee eegeeaggee nteaneeaen ggnngaenng nagenennte geneegegen gegneneeet egeenengaa etnentengg eeantnnege teaaneenna enaaaegeeg etgegeggee egnagegnee neeteenega gteeteeegn etteenaeee angnntteen egaggaeaen nnaeeeegee nneangegg	660 720 780 840 849
<210> 23 <211> 872 <212> DNA <213> Homo sapien	
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cccnccctac ccnncttto ccccaccggt nnccntggo accggncctn ggncgaan nccnacngnt agntcccc	gg gggtgaanct ng ancnntenga	cngnntcanc agngccncnt	cngncgaggn	ntcgnaagga	660 720 780 815
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<210> 26 <211> 820 <212> DNA <213> Homo sap	oien				
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gggnncctcg ntcatcct	et etttttenet	accnccnntt	ctttgcctct	ccttngatca	780

tocaacente gntggeentn ceececennn teetttneec	820
<210> 27 <211> 818 <212> DNA <213> Homo sapien	
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cgctcanacc tcacancctc ccnacnangc ctataangaa nannaataga nctgtncnnt
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aththtache teatanneet ennnaceeae teeetettaa eeentaetgt geetatngen
tnnctantct ntgccgcctn cnanccaccn gtgggccnac cncnngnatt ctcnatctcc
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tenecatntn gectananta ngtneatace etatacetae necaatgeta nnnetaanen
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                                                                       360
tccatnantt annntaacta ccactgacnt ngactttcnc atnanctcct aatttgaatc
                                                                       420
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                                                                       780
ccnaatgaag gncncccaat cnangaaacg nccntgaaaa ancnaggcna anannntccg
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                                                                       180
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getggaagee etggagggee tetetegeea geeteeeet teteteeaeg eteteeangg
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                                                                       300
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ggccgtggga tccactantt ctanaacggn cgccaccncg gtgggagctc cagcttttgt
                                                                       420
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                                                                       480
                                                                       540
gtgaaattgt ttntcccctc ncnattccnc ncnacatacn aacccggaan cataaagtgt
                                                                       600
taaagcctgg gggtngcctn nngaatnaac tnaactcaat taattgcgtt ggctcatggc
ccgctttccn ttcnggaaaa ctgtcntccc ctgcnttnnt gaatcggcca ccccccnggg
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aaaagcggtt tgcnttttng ggggntcctt ccncttcccc cctcnctaan ccctncgcct
                                                                       720
                                                                       780
cggtcgttnc nggtngcggg gaangggnat nnnctcccnc naagggggng agnnngntat
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ccccaaa
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<212> DNA

<213> Homo sapien

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<213> Homo sapien
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     <221> misc feature
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aacaaaggac teetgeagee ttetetgtet gtetettgge geaggeacat ggggaggeet
                                                                     180
                                                                     240
cccgcagggt gggggccacc agtccagggg tgggagcact acanggggtg ggagtgggtg
gtggctggtn cnaatggcct gncacanatc cctacgattc ttgacacctg gatttcacca
                                                                     300
                                                                     360
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cngcanttct ggctgttcat ggaaagcaca ggtgtccnat ttnggctggg acttggtaca
                                                                     420
tatggttccg gcccacctct cccntcnaan aagtaattca ccccccccn ccntctnttg
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cctgggccct taantaccca caccggaact canttantta ttcatcttng gntgggcttg
                                                                     540
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ntnatcnccn cctgaangcg ccaagttgaa aggccacgcc gtncccnctc cccatagnan
nttttnncnt canctaatgc ccccccnggc aacnatccaa tccccccccn tgggggcccc
                                                                     660
                                                                     720
agcccangge eccegneteg ggnnneengn enegnantee ecaggntete ecantengne
connngence eccgeacgea gaacanaagg ntngageene egeannnnnn nggtnnenae
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                                                                     799
ctcgccccc ccnncgnng
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     <211> 789
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120
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ggcaacaggc teeggeggeg geggeggegg cectacetge ggtaccaaat ntgcageete
                                                                     240
cgctcccgct tgatnttcct ctgcagctgc aggatgccnt aaaacagggc ctcggccntn
                                                                     300
ggtgggcacc ctgggatttn aatttccacg ggcacaatgc ggtcgcancc cctcaccacc
nattaggaat agtggtntta cccnccnccg ttggcncact ccccntggaa accacttntc
                                                                     360
                                                                     420
gcggctccgg catctggtct taaaccttgc aaacnctggg gccctctttt tggttantnt
                                                                     480
ncengecaca ateatnacte agaetggene gggetggeee caaaaaanen eeccaaaace
                                                                     540
ggnccatgtc ttnncggggt tgctgcnatn tncatcacct cccgggcnca ncaggncaac
ccaaaagttc ttgnggcccn caaaaaanct ccggggggnc ccagtttcaa caaagtcatc
                                                                     600
                                                                     660
ccccttggcc cccaaatcct cccccgntt nctgggtttg ggaacccacg cctctnnctt
tggnnggcaa gntggntccc ccttcgggcc cccggtgggc ccnnctctaa ngaaaacncc
                                                                     720
                                                                     780
ntectnnea ceateceee nngnnaegne tancaangna teeettttt tanaaaeggg
                                                                     789
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      <211> 793
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aattcatggc tgttggagca atanaacccc agttctacga gctgctgatc aaaggacttg
gactaaagtc tgatgaactt cccaatcaga tgagcatgga tgattggcca gaaatgaana
                                                                       180
                                                                       240
agaagtttgc agatgtattt gcaaagaaga cgaaggcaga gtggtgtcaa atctttgacg
gcacagatgc ctgtgtgact ccggttctga cttttgagga ggttgttcat catgatcaca
                                                                       300
acaangaacg gggctcgttt atcaccantg aggagcagga cgtgagcccc cgccctgcac
                                                                       360
                                                                       420
ctctqctqtt aaacacccca gccatccctt ctttcaaaag ggatccacta cttctagagc
                                                                       480
ggncgccacc gcggtggagc tccagctttt gttcccttta gtgagggtta attgcgcgct
                                                                       540
tggcgtaatc atggtcatan ctgtttcctg tgtgaaattg ttatccgctc acaattccac
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nactcacatt aattggcttt gcgctcactg cccgctttcc agtccggaaa acctgtcctt
                                                                       660
                                                                       720
gccagctgcc nttaatgaat enggecaeee eeeggggaaa aggengtttg ettnttgggg
cgcncttccc gctttctcgc ttcctgaant ccttcccccc ggtctttcgg cttgcggcna
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                                                                       793
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      <212> DNA
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                                                                       120
ancaagtgcg gggaanagct gggtcgactc aagctagttc ttctggagct caacttcttg
                                                                       180
ccaaccacag ggaccaagct gaccaaacag cagctaattc tggcccgtga catactggag
                                                                       240
atcqqqqccc aatqqaqcat cctacqcaan gacatcccct ccttcqaqcq ctacatqqcc
cagctcaaat gctactactt tgattacaan gagcagctcc ccgagtcagc ctatatgcac
                                                                       300
                                                                       360
cagetettgg geeteaacet eetetteetg etgteecaga acegggtgge tgantnecae
                                                                       420
acgganttgg ancggctgcc tgcccaanga catacanacc aatgtctaca tcnaccacca
                                                                       480
gtgtcctgga gcaatactga tgganggcag ctaccncaaa gtnttcctgg ccnagggtaa
catececege egagagetae acettettea ttgacatect getegacaet ateagggatg
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aaaatcgcng ggttgctcca gaaaggctnc aanaanatcc ttttcnctga aggcccccgg
                                                                       600
                                                                       660
atnonctagt notagaateg geoegecate geggtggane etceaacett tegttneeet
ttactgaggg ttnattgccg cccttggcgt tatcatggtc acnccngttn cctgtgttga
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## <223> n = A, T, C or G

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                                                                       120
                                                                       180
taqtcaqaca cnctcttggg caaaaaacan caggatntga gtcttgattt cacctccaat
                                                                       240
aatcttengg getgtetget eggtgaacte gatgaenang ggeagetggt tgtgtntgat
                                                                       300
aaantccanc angttctcct tggtgacctc cccttcaaag ttgttccggc cttcatcaaa
                                                                       360
cttctnnaan angannancc canctttgtc gagctggnat ttgganaaca cgtcactgtt
                                                                       420
qqaaactqat cccaaatqqt atqtcatcca tcgcctctgc tgcctgcaaa aaacttgctt
                                                                       480
ggcncaaatc cgactccccn tccttgaaag aagccnatca caccccctc cctggactcc
                                                                       540
nncaangact ctnccgctnc cccntccnng cagggttggt ggcannccgg gcccntgcgc
                                                                       600
ttcttcagcc agttcacnat nttcatcagc ccctctgcca gctgttntat tccttggggg
                                                                       660
qqaanccqtc tctcccttcc tgaannaact ttgaccgtng gaatagccgc gentencent
                                                                       720
acninctqqq ccqqqttcaa anteceteen tignennien eetegggeea tietggatti
                                                                       780
nccnaacttt ttccttcccc cnccccncgg ngtttggntt tttcatnggg ccccaactct
                                                                       834
getnttggcc anteceetgg gggentntan eneceeetnt ggteeentng ggcc
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      <211> 814
      <212> DNA
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      <221> misc feature
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cctagnaaac attaatgggt tgctctacta atacatcata cnaaccagta agcctgccca
                                                                       180
naacgccaac tcaggccatt cctaccaaag gaagaaaggc tggtctctcc accccctgta
                                                                       240
ggaaaggcct gccttgtaag acaccacaat ncggctgaat ctnaagtctt gtgttttact
                                                                       300
aatggaaaaa aaaaataaac aanaggtttt gttctcatgg ctgcccaccg cagcctggca
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ctaaaacanc ccagcgctca cttctgcttg ganaaatatt ctttgctctt ttggacatca
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ggcttgatgg tatcactgcc acntttccac ccagctgggc ncccttcccc catntttgtc
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aggggangtc ntttncagtg gatctgccaa anantacccn tatcatcnnt gaataaaaag
                                                                       540
gcccctgaac ganatgcttc cancancctt taagacccat aatcctngaa ccatggtgcc
                                                                       600
                                                                       660
cttccggtct gatccnaaag gaatgttcct gggtcccant ccctcctttg ttncttacgt
                                                                       720
tgtnttggac centgetngn atnacecaan tganatecee ngaageacee tneecetgge
                                                                       780
atttganttt cntaaattct ctgccctacn nctgaaagca cnattccctn ggcnccnaan
                                                                       814
ggngaactca agaaggtctn ngaaaaacca cncn
      <210> 37
      <211> 760
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(760)
      <223> n = A, T, C or G
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<pre>&lt;223&gt; n = A,T,C or G  &lt;400&gt; 38  ttttttttt tttttttt tttttttt tttttttt tttt</pre>	60 120 180 240 300 360 420 480 540 600 660 720 724
<210> 39 <211> 751 <212> DNA <213> Homo sapien  <220> <221> misc feature	
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ggccgcctta agctttctaa atttggaaca cgcaaaatca ctcgggggaa nggaaaggtt ttaactgctt gtacaattac ntttcacttt cttgggggtt ccctcccan accaaccccr tcccggcnnt cnttgaaaca cacngcngaa tgaagggtta ccatntttaa cnccacctca ccctcaancn aattnctnng ccccggtcnc cacccccnga annenntnne naacnaaatt cnnagactnt cctcnnenan cncaatttto nnnnccctc cnctngtccn naatcnccar	c gctttgttaa t taattaattg c ctgacaaaaa ngttctcatt c acntggcnnn c gcntnngtcc c ccgaaaatat c ttttnntcac	tcatgcccta tgctnaangc gtgccngccc ntccccncnc gcctgaatcc cncccggct tcccnntcnc	tggtgggtga tttaattana tcaaatnatg caggtnaaaa tcnaaaancn ccgggaantn tcaattcccc	240 300 360 420 480 540 600 660 720 751
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      <220>
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                                                                       180
aagaagataa tatattccaa gcanatacaa aatatctaat gaaagatcaa ggcaggaaaa
                                                                       240
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aaagctttca aaanaaanaa ttattgcagt ctanttaatt caaacagtgt taaatggtat
                                                                       300
                                                                       360
caggataaan aactgaaggg canaaagaat taattttcac ttcatgtaac ncacccanat
                                                                       420
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tggtctctaa tctgccttac tctttgggtg tggctttgat cctctggaga cagctgccag
ggctcctgtt atatccacaa tcccagcagc aagatgaagg gatgaaaaag gacacatgct
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                                                                       590
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                                                                       120
gcttcactgc ttgaaactta aatggatgtg ggacanaatt ttctgtaatg accctgaggg
                                                                       180
cattacagac gggactctgg gaggaaggat aaacagaaag gggacaaagg ctaatcccaa
                                                                       240
                                                                       300
aacatcaaag aaaggaaggt ggcgtcatac ctcccagcct acacagttct ccagggctct
                                                                       360
cctcatccct ggaggacgac agtggaggaa caactgacca tgtccccagg ctcctgtgtg
                                                                       420
ctggctcctg gtcttcagcc cccagctctg gaagcccacc ctctgctgat cctgcgtggc
ccacactcct tgaacacaca tccccaggtt atattcctgg acatggctga acctcctatt
                                                                       480
                                                                       540
cctacttccq agatqccttq ctccctqcag cctqtcaaaa tcccactcac cctccaaacc
acggcatggg aagcetttet gacttgeetg attacteeag catettggaa caateeetga
                                                                       600
                                                                       660
ttccccactc cttagaggca agatagggtg gttaagagta gggctggacc acttggagcc
                                                                       720
aggetgetgq cttcaaattn tggetcattt acgagetatg ggacettggg caagtnatet
tcacttctat gggcntcatt ttgttctacc tgcaaaatgg gggataataa tagt
                                                                       774
      <210> 48
      <211> 124
      <212> DNA
      <213> Homo sapien
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<221> misc_feature <222> (1)(124) <223> n = A,T,C or G	
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<210> 50 <211> 107 <212> DNA <213> Homo sapien	
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<210> 51 <211> 204 <212> DNA <213> Homo sapien	
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<210> 52 <211> 491 <212> DNA <213> Homo sapien	
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<210> 53 <211> 484 <212> DNA <213> Homo sapien	
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Thr	Glu 50		Leu	Leu	Arg	Pro 55		Asp	Ser	Asp	Phe 60		Ser	Ile	Leu	
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Val	Ser	Gln 115		Ala	Asn	Trp	Leu 120		Val	Leu	Leu	Leu 125		Ile	Phe	
-	-		- I	-	T 1	-	<b>*</b> .	**	70	T	T	T 7	70 7 -	14.4	Dh -	

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_	210				Thr	215					220				
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366

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acttttcatt taacancttt tgttaagtgt caggetgcac tttgctccat anaattattg
                                                                        120
                                                                        180
ttttcacatt tcaacttgta tgtgtttgtc tcttanagca ttggtgaaat cacatatttt
                                                                        200
atattcagca taaaggagaa
      <210> 141
      <211> 335
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(335)
      <223> n = A, T, C or G
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<pre>&lt;400&gt; 141 actttatttt caaaacactc atatgttgca aaaaacacat agaaaaataa agtttggtgg gggtgctgac taaacttcaa gtcacagact tttatgtgac agattggagc agggtttgtt atgcatgtag agaacccaaa ctaatttatt aaacaggata gaaacaggct gtctgggtga aatggttctg agaaccatcc aattcacctg tcagatgctg atanactagc tcttcagatg tttttctacc agttcagaga tnggttaatg actanttcca atggggaaaa agcaagatgg</pre>	60 120 180 240 300
attcacaac caagtaattt taaacaaaga cactt  <210> 142 <211> 459 <212> DNA <213> Homo sapien	335
<220> <221> misc_feature <222> (1)(459) <223> n = A,T,C or G	
<pre>&lt;400&gt; 142 accaggttaa tattgccaca tatatccttt ccaattgcgg gctaaacaga cgtgtattta gggttgttta aagacaaccc agcttaatat caagagaaat tgtgaccttt catggagtat ctgatggaga aaacactgag ttttgacaaa tcttattta ttcagatagc agtctgatca cacatggtcc aacaacactc aaataataaa tcaaatatna tcagatgtta aagattggtc ttcaaacatc atagccaatg atgccccgct tgcctataat ctctccgaca taaaaccaca tcaacacctc agtggccacc aaaccattca gcacagcttc cttaactgtg agctgtttga agctaccagt ctgagcacta ttgactatnt ttttcangct ctgaatagct ctagggatct cagcangggt gggaggaacc agctcaacct tggcgtant</pre>	60 120 180 240 300 360 420 459
<210> 143 <211> 140 <212> DNA <213> Homo sapien	
<pre>&lt;400&gt; 143 acatttcctt ccaccaagtc aggactcctg gcttctgtgg gagttcttat cacctgaggg aaatccaaac agtctctcct agaaaggaat agtgtcacca accccaccca tctccctgag accatccgac ttccctgtgt </pre>	60 120 140
<211> 164 <212> DNA <213> Homo sapien	
<220> <221> misc_feature <222> (1)(164) <223> n = A,T,C or G	
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      <211> 303
      <212> DNA
      <213> Homo sapien
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      <221> misc feature
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                                                                         60
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actggagggt atttataccc aattatccca ttcattaaca tgccctcctc ctcaggctat
qcaggacagc tatcataagt cggcccaggc atccagatac taccatttgt ataaacttca
                                                                        180
                                                                        240
qtaqqqqaqt ccatccaagt gacaggtcta atcaaaggag gaaatggaac ataagcccag
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tagtaaaatn ttgcttagct gaaacagcca caaaagactt accgccgtgg tgattaccat
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      <211> 327
      <212> DNA
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      <221> misc feature
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      <400> 146
                                                                         60
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                                                                        180
ccaagtcagg gctgggattt gtttcctttc cacattctag caacaatatg ctggccactt
                                                                        240
cctgaacagg gagggtggga ggagccagca tggaacaagc tgccactttc taaagtagcc
                                                                        300
agacttgccc ctgggcctgt cacacctact gatgaccttc tgtgcctgca ggatggaatg
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taggggtgag ctgtgtgact ctatggt
      <210> 147
      <211> 173
      <212> DNA
      <213> Homo sapien
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      <221> misc feature
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      <223> n = A, T, C or G
      <400> 147
                                                                         60
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                                                                        120
actggaacac atacccacat ctttgttctg agggataatt ttctgataaa gtcttgctgt
                                                                        173
atattcaagc acatatgtta tatattattc agttccatgt ttatagccta gtt
      <210> 148
      <211> 477
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<213> Homo sapien	
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<210> 149 <211> 207 <212> DNA <213> Homo sapien	
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<210> 151 <211> 196 <212> DNA <213> Homo sapien	
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<210> 152

<211> 132 <212> DNA	
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gagggagttt gt	132
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<211> 285	
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(213) None Suprem	
<220>	
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gcacatcaat aaagtccaaa gtcttggact tggccttggc ttggaggaag tcatcaacac cctggctagt gagggtgcgg cgccgctcct ggatgacggc atctgtgaag tcgtgcacca	240
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cctaaqccgg ttacacagct aactcccact ggccctgatt tgtgaaattg ctgctgcctg	180
attggcacag gagtcgaagg tgttcagctc ccctcctccg tggaacgaga ctctgatttg agtttcacaa attctcgggc cacctcgtca ttgctcctct gaaataaaat ccggagaatg	240 300
gtcaggcetg tetcatecat atggatette egg	333
<210> 155 <211> 308	
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ttgaatcacg gtgcatacaa actotootgc ctgctootcc tgggccccag ccccagcccc atcacagctc actgctctgt tcatccaggc ccagcatgta gtggctgatt cttcttggct	180 240
accacayoro acryorory roarocayyo ocayoaryta yeyyoryare occorryyor	

gcttttagcc tccanaagtt tctctgaagc caaccaaacc tctangtgta aggcatgctg gccctggt	300 308
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<210> 157 <211> 126 <212> DNA <213> Homo sapien	
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<210> 158 <211> 442 <212> DNA <213> Homo sapien	
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gtgtgttgtt gganttgage tegggegget gtggtaggtt gtgggetett caacagggge tgetgtggtg eegggangtg aangtgttgt gteacttgag ettggeeage tetggaaagt	240 300
antanattet teetgaagge eagegettgt ggagetggea ngggteantg ttgtgtgtaa	360 420
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ggagcatggc atagaggaag ctganaaatg tggggtctga ggaagccatt tgagtctggc cactagacat ctcatcagcc acttgtgtga agagatgccc catgacccca gatgcctctc	240
ccaccettae etccatetea cacaettgag etttecaete tgtataatte taacateetg	300 360
gagaaaaatg gcagtttgac cgaacctgtt cacaacggta gaggctgatt tctaacgaaa cttgtagaat gaagcctgga	380
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<213> Homo sapien	

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      <222> (1)...(137)
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                                                                         60
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canagaaggc agctacggct actcctacat cctggcgtgg gtggccttcg cctgcacctt
                                                                        137
catcagcggc atgatgt
      <210> 164
      <211> 469
      <212> DNA
      <213> Homo sapien
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      <221> misc_feature
      <222> (1)...(469)
      <223> n = A, T, C or G
      <400> 164
                                                                         60
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tgcaatgcat catgctattt catacctaat gagggagttc caggagattc aaccaggaaa
                                                                        180
tgcatggatc tcaaaggaaa caaacaccca ataaactcgg agtggcagac tgacaactgt
                                                                        240
qaqacatqca cttqctacqa aacagaaatt tcatqttqca cccttqtttc tacacctqtq
                                                                        300
qqttatqaca aaqacaactg ccaaagaatc ttcaagaagg aggactgcaa gtatatcgtg
                                                                        360
gtggagaaga aggacccaaa aaagacctgt tctgtcagtg aatggataat ctaatgtgct
                                                                        420
tctagtaggc acagggctcc caggccaggc ctcattctcc tctggcctct aatagtcaat
                                                                        469
gattgtgtag ccatgcctat cagtaaaaag atntttgagc aaacacttt
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      <211> 195
      <212> DNA
      <213> Homo sapien
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      <221> misc feature
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                                                                         60
                                                                        120
atcogctqtc atccactatt ccttggctag agtaaaaatt attcttatag cccatgtccc
                                                                        180
tgcaggccgc ccgcccgtag ttctcgttcc agtcgtcttg gcacacaggg tgccaggact
                                                                        195
tcctctgaga tgagt
      <210> 166
      <211> 383
      <212> DNA
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## <223> n = A, T, C or G<400> 169 60 acageettgg ettecceaaa etecaeagte teagtgeaga aagateatet teeageagte 120 agctcagacc agggtcaaag gatgtgacat caacagtttc tggtttcaga acaggttcta 180 ctactgtcaa atgacccccc atacttcctc aaaggctgtg gtaagttttg cacaggtgag ggcagcagaa agggggtant tactgatgga caccatcttc tctgtatact ccacactgac 240 300 cttgccatgg gcaaaggccc ctaccacaaa aacaatagga tcactgctgg gcaccagctc 360 acgcacatca ctgacaaccg ggatggaaaa agaantgcca actttcatac atccaactgg 420 aaagtgatct gatactggat tcttaattac cttcaaaagc ttctgggggc catcagctgc 431 tcgaacactg a <210> 170 <211> 266 <212> DNA <213> Homo sapien <220> <221> misc\_feature <222> (1)...(266) <223> n = A, T, C or G<400> 170 60 acctgtgggc tgggctgtta tgcctgtgcc ggctgctgaa agggagttca gaggtggagc 120 tcaaggaget etgeaggeat tttgecaane etetecanag canagggage aacetacaet 180 ccccgctaga aagacaccag attggagtcc tgggaggggg agttggggtg ggcatttgat 240 gtatacttgt cacctgaatg aangagccag agaggaanga gacgaanatg anattggcct 266 tcaaagctag gggtctggca ggtgga <210> 171 <211> 1248 <212> DNA <213> Homo sapien <220> <221> misc\_feature <222> (1)...(1248) $\langle 223 \rangle$ n = A,T,C or G <400> 171 60 ggcagccaaa tcataaacgg cgaggactgc agcccgcact cgcagccctg gcaggcggca 120 ctggtcatgg aaaacgaatt gttctgctcg ggcgtcctgg tgcatccgca gtgggtgctg 180 tcagccgcac actgtttcca gaagtgagtg cagagctcct acaccatcgg gctgggcctg 240 cacagtettg aggeegacea agageeaggg ageeagatgg tggaggeeag ceteteegta 300 cggcacccag agtacaacag accettgete getaacgace teatgeteat caagttggae 360 gaatccgtgt ccgagtctga caccatccgg agcatcagca ttgcttcgca gtgccctacc 420 gcggggaact cttgcctcgt ttctggctgg ggtctgctgg cgaacggcag aatgcctacc gtgctgcagt gcgtgaacgt gtcggtggtg tctgaggagg tctgcagtaa gctctatgac 480 540 ccgctgtacc accccagcat gttctgcgcc ggcggagggc aagaccagaa ggactcctgc aacggtgact ctggggggcc cctgatctgc aacgggtact tgcagggcct tgtgtctttc 600 660 ggaaaagccc cgtgtggcca agttggcgtg ccaggtgtct acaccaacct ctgcaaattc

actgagtgga tagagaaaac cgtccaggcc agttaactct ggggactggg aacccatgaa

attgaccccc aaatacatcc tgcggaagga attcaggaat atctgttccc agcccctcct ccctcaggcc caggagtcca ggcccccagc ccctcctccc tcaaaccaag ggtacagatc

720

780

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<210> 172 <211> 159 <212> PRT <213> Homo sapien
<220> <221> VARIANT <222> (1)(159) <223> Xaa = Any Amino Acid
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1 5 10 15  Leu Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser 20 25 30
Glu Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr 35 40 45
Ala Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly 50 55 60
Arg Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu 65 70 75 80
Glu Val Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe 85 90 95
Cys Ala Gly Gly Gln Xaa Gln Xaa Asp Ser Cys Asn Gly Asp Ser
Gly Gly Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe 115 120 125
Gly Lys Ala Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn 130 135 140
Leu Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser 145 150 155
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tacaccatcg ggctgggcct gcacagtctt gaggccgacc aagagccagg gagccagatg

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gaagtgagtt gagatcacac cactatactc cagctggggc aacagagtaa gactctgtct caaaaaaaaa aaaaaaaaa	1440 1459
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Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val 35 40 45 Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Leu Leu Leu 50 55 60	

<221> VARIANT <222> (1)...(164)

<223> Xaa = Any Amino Acid

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Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met
                                                     110
            100
                                105
Pro Thr Val Leu His Cys Val Asn Val Ser Val Val Ser Glu Xaa Val
                            120
        115
Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala
                                             140
                        135
Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly
                                         155
                    150
Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys
                                                         175
                                     170
                165
Ala Pro Cys Gly Gln Leu Gly Val Pro Gly Val Tyr Thr Asn Leu Cys
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            180
Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Xaa Ser
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atcgggctgg gcctgcacag tcttgaggcc gaccaagagc cagggagcca gatggtggag
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gccagcctct ccgtacggca cccagagtac aacagaccct tgctcgctaa cgacctcatg
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                                                                        900
ctcagtacac cagggcaggt ctagcatttc ttcatttagt gtatgctgtc cattcatgca
                                                                        960
                                                                       1020
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Gly	Leu	His 35		Leu	Glu	Ala	Asp 40	Gln	Glu	Pro	Gly	Ser 45	Gln	Met	Val	
Glu	Ala 50		Leu	Ser	Val	Arg 55	His	Pro	Glu	Tyr	Asn 60	Arg	Pro	Leu	Leu	
Ala 65		Asp	Leu	Met	Leu 70	-	Lys	Leu	Asp	Glu 75	Ser	Val	Ser	Glu	Ser 80	
Asp	Thr	Ile	Arg	Ser 85		Ser	Ile	Ala	Ser 90	Gln	Cys	Pro	Thr	Ala 95	Gly	
Asn	Ser	Суѕ	Leu 100		Ser	Gly	Trp	Gly 105	Leu	Leu	Ala	Asn	Asp 110	Ala	Val	
Ile	Ala	Ile 115		Ser	Xaa	Thr	Val 120	Gly	Gly	Trp	Glu	Cys 125	Glu	Lys	Leu	
Ser	Gln 130		Trp	Gln	Gly	Cys 135	Thr	Ile	Ser	Ala	Thr 140	Ser	Ser	Ala	Arg	
Thr 145	Ser	Cys	Cys	Ile	Leu 150	Thr	Gly	Cys	Ser	Leu 155	Leu	Leu	Thr	Ala	Ser 160	
	Gly	Thr	Leu													
a+ a	<: <: <:	212> 213> 400>	250 DNA Homo			3.000.	oct a	c ag	<b>.</b>	Caga	ato	cacc.	ttc	taaa	gcacct	60
cca gcc aag	gctg aggc	ccc act tat	ccgg gttc	ccgg atct	gg g ca g	atgc cttt	gagg tctg	c tc t cc	ggag cttt	cacc gctc	ctt	gccc gcaa	gcg ggc	tgtg.	attgct tgctga gaaaaa	120 180 240 250
	<: <:	211> 212> 213>	180 202 DNA Hom	o sa	pien											
tca ctc	agtc ccca tgct	cag gac act	cccq	cccc aact	tg c at t	ccgt ttta	gccc	c ac	gctg	ctgc	taa	cgac	agt	atga	ttaaca tgctta aatgcc	60 120 180 202
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agggagatcg agtctatacg ctgaagaaat ttgacccgat gggacaacag acctgctcag
cccatcctgc tcggttctcc ccagatgaca aatactctsg acaccgaatc accatcaaga
                                                                       180
                                                                       240
aacgettcaa ggtgetcatg acceageaac egegeeetgt eetetgaggg teeettaaac
                                                                       300
tgatgtcttt tctgccacct gttacccctc ggagactccg taaccaaact cttcggactg
                                                                       360
tgagecetga tgeetttttg ceagecatae tetttggeat eeagtetete gtggegattg
                                                                       420
attatgcttg tgtgaggcaa tcatggtggc atcacccata aagggaacac atttgacttt
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tttttctcat attttaaatt actacmagaw tattwmagaw waaatgawtt gaaaaactst
                                                                       496
taaaaaaaa aaaaaa
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                                                                         60
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caagtatcyt gcgcsgcgtc ttctaccgtc cctacctgca gatcttcggg cagattcccc
                                                                       180
aggaggacat ggacgtggcc ctcatggagc acagcaactg ytcgtcggag cccggcttct
                                                                        240
qqqcacaccc teetgqgqcc caggegqgca cetgegtete ceagtatgee aactggetgg
                                                                        300
tggtgctgct cctcgtcatc ttcctgctcg tggccaacat cctgctggtc aacttgctca
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                                                                        120
                                                                        180
ccaggaaact ctcaatcaag tcaccgtcga tgaaacctgt gggctggttc tgtcttccgc
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tcggtgtgaa aggatctccc agaaggagtg ctcgatcttc cccacacttt tgatgacttt
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cagecetate atgeegttga megtgeegaa gareaeegag eettgtgtgg gggkkgaagt
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                                                                        420
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gtggaaaaag amcamctcct ggargtgctn gccgctcctc gtcmgttggt ggcagcgctw
                                                                        540
teettttgae acacaaacaa gttaaaggea tttteageee eeagaaantt gteateatee
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                                                                       120
                                                                       180
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tgccctattc acacctgtta aaagggcgct aagcattttt gattcaacat ctttttttt
                                                                        240
                                                                       300
gacacaagtc cgaaaaaagc aaaagtaaac agttatyaat ttgttagcca attcactttc
ttcatgggac agagccatyt gatttaaaaa gcaaattgca taatattgag cttygggagc
                                                                        360
tgatatttga gcggaagagt agcctttcta cttcaccaga cacaactccc tttcatattg
                                                                        420
                                                                        480
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                                                                        534
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                                                                        120
cctctttggt atctatatct gtgaaagttt taatgatctg ccataatgtc ttggggacct
                                                                        180
ttgtcttctg tgtaaatggt actagagaaa acacctatnt tatgagtcaa tctagttngt
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                                                                        300
ggggacaaag aaaagcaaaa ctgamcataa raaacaatwa cctggtgaga arttgcataa
                                                                        360
acagaaatwr ggtagtatat tgaarnacag catcattaaa rmgttwtktt wttctccctt
                                                                        420
gcaaaaaaca tgtacngact tcccgttgag taatgccaag ttgtttttt tatnataaaa
                                                                        480
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                                                                        600
                                                                        660
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tttttctgtn ttcccagagc tgagatntta gattttatgt agtatnaagt gaaaaantac
                                                                        720
                                                                        761
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      <211> 482
      <212> DNA
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      <220>
      <221> misc feature
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      <221> misc feature
      <222> (1)...(601)
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                                                                        120
                                                                        180
atgcytyttt gaytaccgtg tgccaagtgc tggtgattct yaacacacyt ccatcccgyt
                                                                        240
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                                                                        300
acgagacact tgaaaggtgt aacaaagcga ytcttgcatt gctttttgtc cctccggcac
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tacatctcct gacagtactg aagaacttct tcttttgttt caaaagcarc tcttggtgcc
                                                                        480
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ggtcccgctg tagccccagc gactctccac ctgctggaag cggttgatgc tgcactcytt
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cccaacgcag gcagmagcgg gsccggtcaa tgaactccay tcgtggcttg gggtkgacgg
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                                                                        300
ctgcagcgaa actcctcgat ggtcatgagc gggaagcgaa tgaggcccag ggccttgccc
                                                                        360
agaacettee geetgttete tggegteace tgeagetget geegetgaea eteggeeteg
                                                                        420
gaccagegga caaacggert tgaacageeg caceteaegg atgeecagtg tgtegegete
                                                                        480
caggammgsc accagegtgt ccaggtcaat gteggtgaag eeeteegegg gtratggegt
                                                                        540
ctgcagtgtt tttgtcgatg ttctccaggc acaggctggc cagctgcggt tcatcgaaga
                                                                        600
gtcgcgcctg cgtgagcage atgaaggcgt tgtcggctcg cagttcttct tcaggaactc
                                                                        608
cacgcaat
      <210> 194
      <211> 392
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(392)
      <223> n = A, T, C or G
      <400> 194
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gaacggctgg accttgcctc gcattgtgct to ccagtccgag cagccccaga ccgctgccgc tccgcctcaa tgcagaacca gtagtgggag tttgattta cttgggaatt tcctctgtta taaagaaaat attactgtta catatactgc aaataaatat agttattaaa ggttgtcant c	ccgaagctaa cactgtgttt tatagctttt aagttgtata ttgcaatttc	gcctgcctct agagttaaga cccaatgcta aaagtaggtg	ggccttcccc gtgaacactg atttccaaac attctgtatt	60 120 180 240 300 360 392
<210> 195 <211> 502 <212> DNA <213> Homo sapien				
<220> <221> misc_feature <222> (1)(502) <223> n = A,T,C or G				
<pre>&lt;400&gt; 195 ccsttkgagg ggtkaggkyc cagttyccga ccgagctgag gcagatgttc ccacagtgac cctcncaagg aaagaccacs ttctggggac aagggaaggc cccattccgg ggstgttccc ccccasgagg aagaggccct gagtcctggg caaatgcaag ctcaccaagg tcccctctca gscscacacc cacccagagc acgccacccg gcarcgtgga catctngtcc cagaaggggg gctnanaaaa aaaaanaaaa aa</pre>	ccccagagcc atgggctgga cgaggaggaa atcagacacc gtccccttcc ccatggggar	stgggstata gggcaggacc gggaagggc ccttcacgtg stacaccctg tgtgctcaag	gtytctgacc tagaggcacc tctgtgtgcc tatccccaca amcggccact gartcgcngg	60 120 180 240 300 360 420 480 502
<210> 196 <211> 665 <212> DNA <213> Homo sapien <220>	·			٠
<221> misc_feature <222> (1)(665) <223> n = A,T,C or G				
<pre>&lt;400&gt; 196 ggttacttgg tttcattgcc accacttagt cctctggaag ccttgcgcag agcggacttt wagctgttk gagttgatts gcaccactgc actwatttat tatcttgtga aaagtataac aagtatgatg aaaagcaawa gatatatat attaatcggc aaaatgtgga gtgtatgttc tcacttggtt attttattgt aaatgartta watatttatt tcattaattt ctttcctkgt tcttgacaga aatcgatctt gatgctgtgg ttcttagaat gtataaaggt tgtagcccat tttgcaatca ggctgaaatg tggcatgctn aagtg</pre>	gtaattgttg acccacaact aatgaaaatt cttttattat ttttcacagt caaaattctt ttacgtwaat aagtagtttg cnaacttcaa	gagaataact tcaatatgaa ttgttcatac gttaaattat aatatatgcc aatttaagar tttgaaaaga acccacatcc agaaaaaaa	gctgaatttt aacyawttga tgtattkatc gattgccatt ttttgtaact aatggtatgt wtgcatgatt ctatgagttt gaccacatac	60 120 180 240 300 360 420 480 540 600 660 665

```
<211> 492
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(492)
      <223> n = A, T, C or G
      <400> 197
                                                                        60
ttttnttttt tttttttgc aggaaggatt ccatttattg tggatgcatt ttcacaatat
atgtttattg gagcgatcca ttatcagtga aaagtatcaa gtgtttataa natttttagg
                                                                       120
                                                                       180
aaqqcaqatt cacaqaacat gctngtcngc ttgcagtttt acctcgtana gatnacagag
aattatagtc naaccagtaa acnaggaatt tacttttcaa aagattaaat ccaaactgaa
                                                                       240
                                                                        300
caaaattcta ccctgaaact tactccatcc aaatattgga ataanagtca gcagtgatac
                                                                       360
attctcttct gaactttaga ttttctagaa aaatatgtaa tagtgatcag gaagagctct
tgttcaaaag tacaacnaag caatgttccc ttaccatagg ccttaattca aactttgatc
                                                                        420
catttcactc ccatcacggg agtcaatgct acctgggaca cttgtatttt gttcatnctg
                                                                        480
                                                                        492
ancntggctt aa
      <210> 198
      <211> 478
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(478)
      <223> n = A, T, C or G
      <400> 198
tttnttttgn atttcantct gtannaanta ttttcattat gtttattana aaaatatnaa
                                                                         60
tgtntccacn acaaatcatn ttacntnagt aagaggccan ctacattgta caacatacac
                                                                        120
tgagtatatt ttgaaaagga caagtttaaa gtanacncat attgccganc atancacatt
                                                                        180
                                                                        240
tatacatggc ttgattgata tttagcacag canaaactga gtgagttacc agaaanaaat
                                                                        300
natatatgtc aatcngattt aagatacaaa acagatccta tggtacatan catcntgtag
gagttgtggc tttatgttta ctgaaagtca atgcagttcc tgtacaaaga gatggccgta
                                                                        360
agcattctag tacctctact ccatggttaa gaatcgtaca cttatgttta catatgtnca
                                                                        420
                                                                        478
gggtaagaat tgtgttaagt naanttatgg agaggtccan gagaaaaatt tgatncaa
      <210> 199
      <211> 482
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(482)
      <223> n = A, T, C or G
      <400> 199
                                                                         60
agtgacttgt cctccaacaa aaccccttga tcaagtttgt ggcactgaca atcagaccta
                                                                        120
tgctagttcc tgtcatctat tcgctactaa atgcagactg gaggggacca aaaaggggca
tcaactccag ctggattatt ttggagcctg caaatctatt cctacttgta cggactttga
                                                                        180
```

```
240
agtgattcag tttcctctac ggatgagaga ctggctcaag aatatcctca tgcagcttta
                                                                        300
tgaagccnac tctgaacacg ctggttatct nagatgagaa ncagagaaat aaagtcnaga
                                                                        360
aaatttacct ggangaaaag aggctttngg ctggggacca tcccattgaa ccttctctta
                                                                        420
anggacttta agaanaaact accacatgtn tgtngtatcc tggtgccngg ccgtttantg
                                                                        480
aacntngacn ncaccettnt ggaatanant ettgaengen teetgaactt geteetetge
                                                                        482
ga
      <210> 200
      <211> 270
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc_feature
      <222> (1)...(270)
      <223> n = A, T, C or G
      <400> 200
                                                                         60
cggccgcaag tgcaactcca gctggggccg tgcggacgaa gattctgcca gcagttggtc
                                                                        120
cgactgcgac gacggcggcg gcgacagtcg caggtgcagc gcgggcgcct ggggtcttgc
                                                                        180
aaggetgage tgaegeegea gaggtegtgt caegteeeae gaeettgaeg eegtegggga
                                                                        240
cageeggaae agageeeggt gaangeggga ggeetegggg ageeeetegg gaagggegge
                                                                        270
ccgagagata cgcaggtgca ggtggccgcc
      <210> 201
      <211> 419
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(419)
      <223> n = A, T, C or G
      <400> 201
                                                                         60
ttttttttt ttttggaatc tactgcgagc acagcaggtc agcaacaagt ttattttgca
                                                                        120
gctagcaagg taacagggta gggcatggtt acatgttcag gtcaacttcc tttgtcgtgg
                                                                        180
ttgattggtt tgtctttatg ggggcggggt ggggtagggg aaancgaagc anaantaaca
tggagtgggt gcaccctccc tgtagaacct ggttacnaaa gcttggggca gttcacctgg
                                                                        240
                                                                        300
tctgtgaccg tcattttctt gacatcaatg ttattagaag tcaggatatc ttttagagag
                                                                        360
tccactgtnt ctggagggag attagggttt cttgccaana tccaancaaa atccacntga
                                                                        419
aaaagttgga tgatncangt acngaatacc ganggcatan ttctcatant cggtggcca
      <210> 202
      <211> 509
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(509)
      <223> n = A, T, C or G
      <400> 202
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60
tggcacttaa tccattttta tttcaaaatg tctacaaant ttnaatncnc cattatacng
                                                                     120
                                                                     180
gtnattttnc aaaatctaaa nnttattcaa atntnagcca aantccttac ncaaatnnaa
                                                                     240
tacnoncaaa aatcaaaaat atacntntot ttoaqoaaac ttnqttacat aaattaaaaa
                                                                     300
aatatatacg gctggtgttt tcaaagtaca attatcttaa cactgcaaac atntttnnaa
qqaactaaaa taaaaaaaaa cactnccgca aaggttaaag ggaacaacaa attcntttta
                                                                     360
caacancnnc nattataaaa atcatatctc aaatcttagg ggaatatata cttcacacng
                                                                     420
                                                                     480
qqatcttaac ttttactnca ctttgtttat ttttttanaa ccattgtntt gggcccaaca
                                                                     509
caatggnaat nccnccncnc tggactagt
     <210> 203
      <211> 583
      <212> DNA
      <213> Homo sapien
     <220>
      <221> misc feature
      <222> (1)...(583)
      <223> n = A, T, C or G
      <400> 203
                                                                      60
ttttttttt tttttttga ccccctctt ataaaaaaca agttaccatt ttattttact
                                                                     120
tacacatatt tattttataa ttggtattag atattcaaaa ggcagctttt aaaatcaaac
                                                                     180
taaatggaaa ctgccttaga tacataattc ttaggaatta gcttaaaatc tgcctaaagt
                                                                     240
gaaaatette tetagetett tigaetgiaa attittigaet etigtaaaac atecaaatte
                                                                     300
atttttcttq tctttaaaat tatctaatct ttccattttt tccctattcc aagtcaattt
                                                                     360
gcttctctag cctcatttcc tagctcttat ctactattag taagtggctt ttttcctaaa
                                                                     420
agggaaaaca ggaagagana atggcacaca aaacaaacat tttatattca tatttctacc
                                                                     480
tacgttaata aaatagcatt ttgtgaagcc agctcaaaag aaggcttaga tccttttatg
                                                                     540
tccattttag tcactaaacg atatcnaaag tgccagaatg caaaaggttt gtgaacattt
                                                                     583
attcaaaaqc taatataaqa tatttcacat actcatcttt ctg
      <210> 204
      <211> 589
      <212> DNA
     <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(589)
      <223> n = A, T, C or G
      <400> 204
                                                                      60
tttttttttt tttttttt ttttttnctc ttctttttt ttganaatga ggatcgagtt
tttcactctc tagatagggc atgaagaaaa ctcatctttc cagctttaaa ataacaatca
                                                                     120
                                                                     180
aatctcttat gctatatcat attttaagtt aaactaatga gtcactggct tatcttctcc
                                                                     240
tgaaggaaat ctgttcattc ttctcattca tatagttata tcaagtacta ccttgcatat
                                                                     300
tgagaggttt ttcttctcta tttacacata tatttccatg tgaatttgta tcaaaccttt
                                                                     360
attttcatgc aaactagaaa ataatgtntt cttttgcata agagaagaga acaatatnag
                                                                     420
cattacaaaa ctqctcaaat tgtttgttaa gnttatccat tataattagt tnggcaggag
                                                                     480
ctaatacaaa tcacatttac ngacnagcaa taataaaact gaagtaccag ttaaatatcc
                                                                     540
aaaataatta aaggaacatt tttagcctgg gtataattag ctaattcact ttacaagcat
                                                                     589
ttattnagaa tgaattcaca tgttattatt ccntagccca acacaatgg
```

```
<210> 205
      <211> 545
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(545)
      <223> n = A, T, C or G
      <400> 205
tttttntttt ttttttcagt aataatcaga acaatattta tttttatatt taaaattcat
                                                                         60
agaaaagtgc cttacattta ataaaagttt gtttctcaaa gtgatcagag gaattagata
                                                                        120
tngtcttgaa caccaatatt aatttgagga aaatacacca aaatacatta agtaaattat
                                                                        180
ttaagatcat agagcttgta agtgaaaaga taaaatttga cctcagaaac tctgagcatt
                                                                        240
aaaaatccac tattagcaaa taaattacta tggacttctt gctttaattt tgtgatgaat
                                                                        300
atggggtgtc actggtaaac caacacattc tgaaggatac attacttagt gatagattct
                                                                        360
tatgtacttt gctanatnac gtggatatga gttgacaagt ttctctttct tcaatctttt
                                                                        420
aaggggcnga ngaaatgagg aagaaaagaa aaggattacg catactgttc tttctatngg
                                                                        480
                                                                        540
aaggattaga tatgtttcct ttgccaatat taaaaaaata ataatgttta ctactagtga
                                                                        545
aaccc
      <210> 206
      <211> 487
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(487)
      <223> n = A, T, C or G
      <400> 206
                                                                         60
ttttttttt ttttttagtc aagtttctna tttttattat aattaaagtc ttggtcattt
                                                                        120
catttattag ctctgcaact tacatattta aattaaagaa acgttnttag acaactgtna
                                                                        180
caatttataa atgtaaggtg ccattattga gtanatatat tcctccaaga gtggatgtgt
cccttctccc accaactaat gaancagcaa cattagttta attttattag tagatnatac
                                                                        240
                                                                        300
actgctgcaa acgctaattc tcttctccat ccccatgtng atattgtgta tatgtgtgag
ttggtnagaa tgcatcanca atctnacaat caacagcaag atgaagctag gcntgggctt
                                                                        360
tcggtgaaaa tagactgtgt ctgtctgaat caaatgatct gacctatcct cggtggcaag
                                                                        420
aactettega acceetteet caaaggenge tgecacattt gtggentetn ttgeacttgt
                                                                        480
                                                                        487
ttcaaaa
      <210> 207
      <211> 332
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(332)
      <223> n = A, T, C or G
      <400> 207
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tgaattggct aaaagactgc atttttanaa ctagcaactc ttatttcttt cctttaaaaa tacatagcat taaatcccaa atcctattta aagacctgac agcttgagaa ggtcactact gcatttatag gaccttctgg tggttctgct gttacntttg aantctgaca atccttgana atctttgcat gcagaggagg taaaaggtat tggatttca cagaggaana acacagcgca gaaatgaagg ggccaggctt actgagcttg tccactggag ggctcatggg tgggacatgg aaaagaaggc agcctaggcc ctggggagcc ca	60 120 180 240 300 332
<210> 208 <211> 524 <212> DNA <213> Homo sapien	
<220> <221> misc_feature <222> (1)(524) <223> n = A,T,C or G	
agggcgtggt gcggagggcg ttactgttt gtctcagtaa caataaatac aaaaagactg gttgtgttcc ggccccatcc aaccacgaag ttgatttctc ttgtgtgcag agtgactgat ttaaaggac atggagcttg tcacaatgtc acaatgtcac agtgtgaagg gcacactcac tcccgcgtga ttcacattta gcaaccaaca atagctcat agtccatact tgtaaatact tttggcagaa tacttnttga aacttgcaga tgataactaa gatccaagat atttcccaaa gtaaatagaa gtgggtcata atattaatta cctgttcaca tcagcttcca tttacaagtc atgaaccaga caggaggctg tcaccttgac caaattctca ccagtcaatc atctaccaa aaaccattac ctgatccact tccggtaatg caccaccttg gtga	60 120 180 240 300 360 420 480 524
<210> 209 <211> 159 <212> DNA <213> Homo sapien	
<pre>&lt;400&gt; 209 gggtgaggaa atccagagtt gccatggaga aaattccagt gtcagcattc ttgctccttg tggccctctc ctacactctg gccagagata ccacagtcaa acctggagcc aaaaaggaca caaaggactc tcgacccaaa ctgccccaga ccctctcca  &lt;210&gt; 210 &lt;211&gt; 256 &lt;212&gt; DNA &lt;213&gt; Homo sapien</pre>	60 120 159
<220> <221> misc_feature <222> (1)(256) <223> n = A,T,C or G	
<400> 210 actccctggc agacaaaggc agaggagaga gctctgttag ttctgtgttg ttgaactgcc actgaatttc tttccacttg gactattaca tgccanttga gggactaatg gaaaaacgta tggggagatt ttanccaatt tangtntgta aatggggaga ctggggcagg cgggagagat ttgcagggtg naaatgggan ggctggtttg ttanatgaac agggacatag gaggtaggca ccaggatgct aaatca	60 120 180 240 256

```
<210> 211
      <211> 264
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(264)
      <223> n = A,T,C or G
      <400> 211
                                                                         60
acattgtttt tttgagataa agcattgaga gagctctcct taacgtgaca caatggaagg
actggaacac atacccacat ctttgttctg agggataatt ttctgataaa gtcttgctgt
                                                                        120
                                                                        180
atattcaagc acatatgtta tatattattc agttccatgt ttatagccta gttaaggaga
                                                                        240
ggggagatac attcngaaag aggactgaaa gaaatactca agtnggaaaa cagaaaaaga
                                                                        264
aaaaaaggag caaatgagaa gcct
      <210> 212
      <211> 328
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(328)
      <223> n = A, T, C or G
      <400> 212
                                                                         60
acccaaaaat ccaatgctga atatttggct tcattattcc canattcttt gattgtcaaa
ggatttaatg ttgtctcagc ttgggcactt cagttaggac ctaaggatgc cagccggcag
                                                                        120
                                                                        180
gtttatatat gcagcaacaa tattcaagcg cgacaacagg ttattgaact tgcccgccag
                                                                        240
ttnaatttca ttcccattga cttgggatcc ttatcatcag ccagagagat tgaaaattta
cccctacnac tctttactct ctgganaggg ccagtggtgg tagctataag cttggccaca
                                                                        300
                                                                        328
ttttttttc ctttattcct ttgtcaga
      <210> 213
      <211> 250
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(250)
      <223> n = A, T, C or G
      <400> 213
acttatgage agagegacat atcenagtgt agactgaata aaactgaatt etetecagtt
                                                                         60
taaagcattg ctcactgaag ggatagaagt gactgccagg agggaaagta agccaaggct
                                                                        120
cattatgcca aagganatat acatttcaat tctccaaact tcttcctcat tccaagagtt
                                                                        180
ttcaatattt gcatgaacct gctgataanc catgttaana aacaaatatc tctctnacct
                                                                        240
                                                                        250
tctcatcggt
```

```
<211> 444
     <212> DNA
     <213> Homo sapien
     <220>
     <221> misc_feature
      <222> (1)...(444)
      <223> n = A, T, C or G
      <400> 214
acccagaatc caatgctgaa tatttggctt cattattccc agattctttg attgtcaaag
                                                                         60
                                                                        120
gatttaatgt tgtctcagct tgggcacttc agttaggacc taaggatgcc agccggcagg
                                                                        180
tttatatatg cagcaacaat attcaagcgc gacaacaggt tattgaactt gcccgccagt
                                                                        240
tgaatttcat tcccattgac ttgggatcct tatcatcagc canagagatt gaaaatttac
ccctacgact ctttactctc tggagagggc cagtggtggt agctataagc ttggccacat
                                                                        300
                                                                        360
ttttttttcc tttattcctt tgtcagagat gcgattcatc catatgctan aaaccaacag
agtgactttt acaaaattcc tataganatt gtgaataaaa ccttacctat agttgccatt
                                                                        420
                                                                        444
actttgctct ccctaatata cctc
      <210> 215
      <211> 366
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc feature
      <222> (1)...(366)
      <223> n = A, T, C or G
      <400> 215
                                                                         60
acttatgagc agagcgacat atccaagtgt anactgaata aaactgaatt ctctccagtt
                                                                        120
taaagcattg ctcactgaag ggatagaagt gactgccagg agggaaagta agccaaggct
                                                                        180
cattatgcca aagganatat acatttcaat tctccaaact tcttcctcat tccaagagtt
ttcaatattt gcatgaacct gctgataagc catgttgaga aacaaatatc tctctgacct
                                                                        240
                                                                        300
tctcatcggt aagcagaggc tgtaggcaac atggaccata gcgaanaaaa aacttagtaa
                                                                        360
tccaagctgt tttctacact gtaaccaggt ttccaaccaa ggtggaaatc tcctatactt
                                                                        366
ggtgcc
      <210> 216
      <211> 260
      <212> DNA
      <213> Homo sapien
      <220>
      <221> misc_feature
      <222> (1)...(260)
      <223> n = A, T, C or G
      <400> 216
                                                                         60
ctqtataaac aqaactccac tgcangaggg agggccgggc caggagaatc tccgcttgtc
caagacaggg gcctaaggag ggtctccaca ctgctnntaa gggctnttnc attttttat
                                                                        120
                                                                        180
taataaaaag tnnaaaaggc ctcttctcaa cttttttccc ttnggctgga aaatttaaaa
                                                                        240
atcaaaaatt tootnaagtt ntcaagctat catatatact ntatootgaa aaagcaacat
                                                                        260
aattcttcct tccctccttt
```

<210> 217 <211> 262 <212> DNA <213> Homo sapien	
<220> <221> misc_feature <222> (1)(262) <223> n = A,T,C or G	
<pre>&lt;400&gt; 217 acctacgtgg gtaagtttan aaatgttata atttcaggaa naggaacgca tataattgta tcttgcctat aattttctat tttaataagg aaatagcaaa ttggggtggg gggaatgtag ggcattctac agtttgagca aaatgcaatt aaatgtggaa ggacagcact gaaaaatttt atgaataatc tgtatgatta tatgtctcta gagtagattt ataattagcc acttacccta atatccttca tgcttgtaaa gt</pre>	60 120 180 240 262
<210> 218 <211> 205 <212> DNA <213> Homo sapien	
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301

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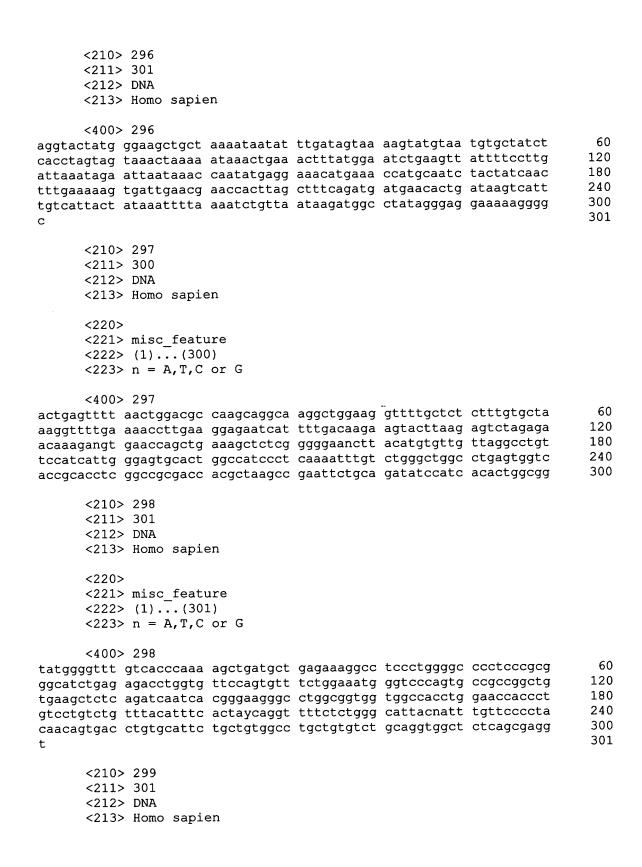
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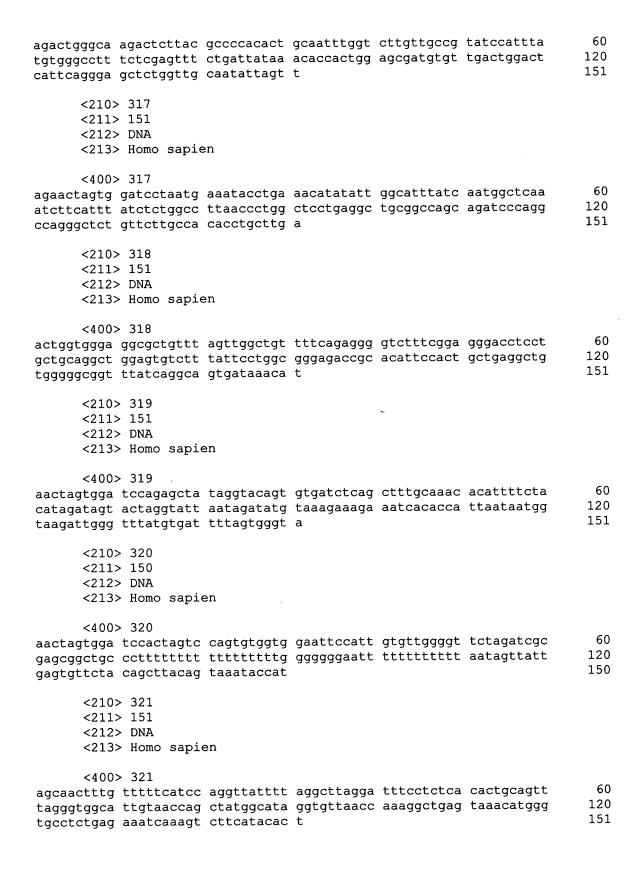
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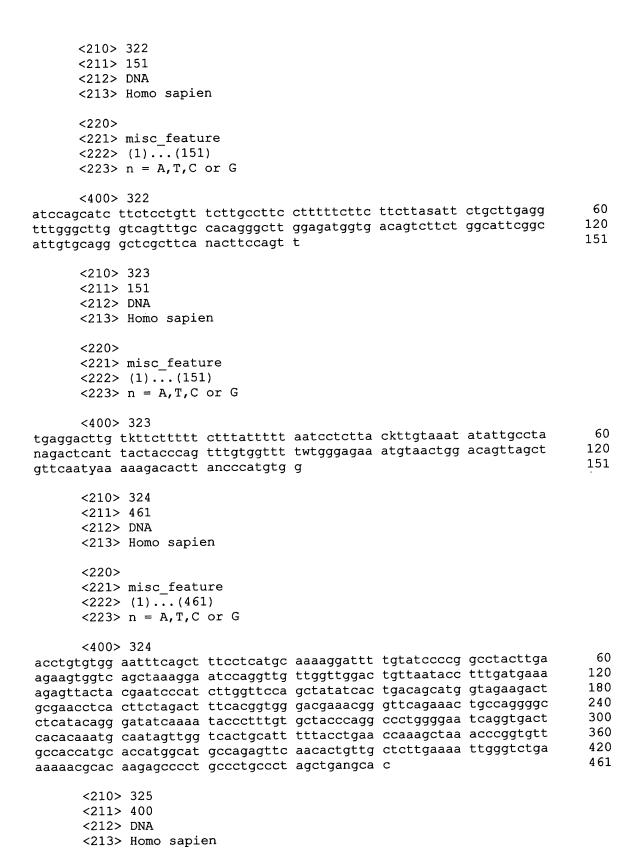
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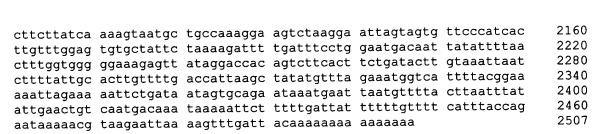
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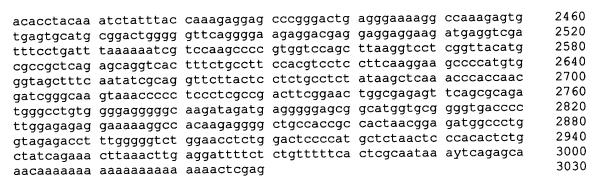
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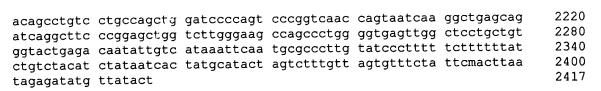
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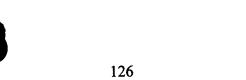
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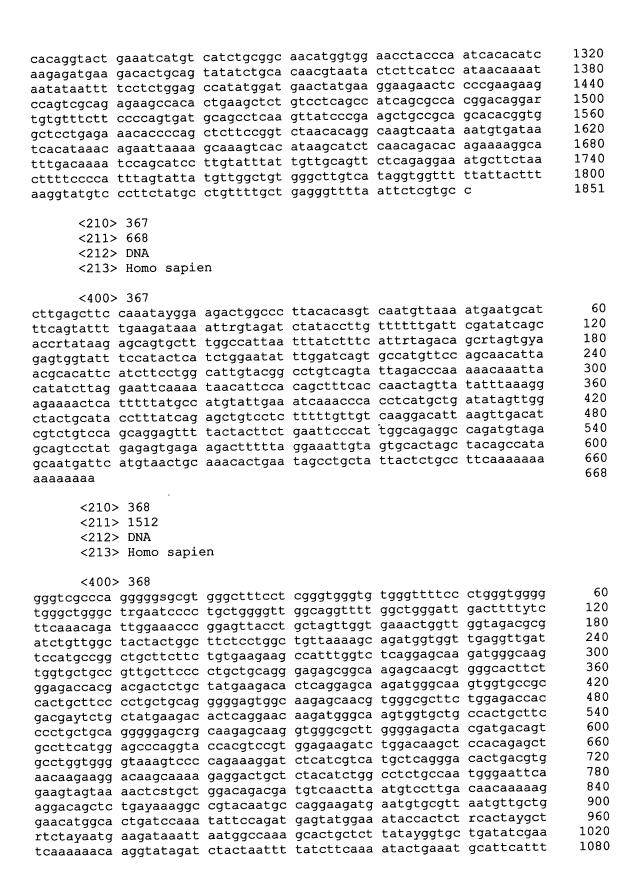
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<213> Homo sapien



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<212> DNA

<213> Homo sapien

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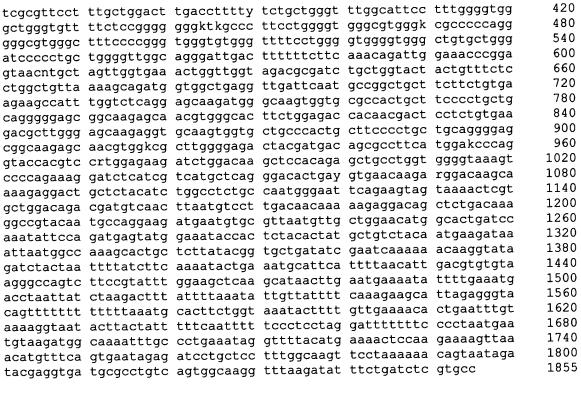
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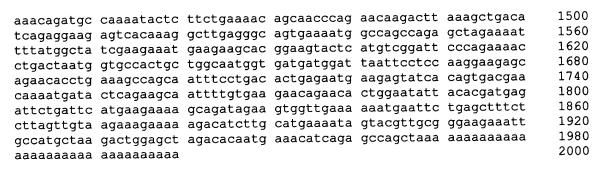
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<211> 148

<212> PRT

<213> Homo sapien

<220>

<221> VARIANT

145

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<400> 377

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<210> 378 <211> 1719 <212> PRT <213> Homo sapien

<400> 378

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185 180 Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr 200 Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met 220 215 Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn 235 230 Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys 250 245 Ala Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly 265 Leu Thr Pro Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val 280 Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr 300 295 Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile 315 310 Val Ser Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu 330 325 Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val 345 340 Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile 360 365 Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn Lys 380 375 Pro Arg Thr His Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser 395 390 Ser Val Lys Lys Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys 410 405 Cys Arg Cys Phe Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly 425 Thr Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys 440 435 Met Gly Lys Trp Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly 455 Lys Ser Asn Val Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys 475 470 Thr Leu Arg Asn Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys 490 485 Cys Arg Gly Ser Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp 505 500 Asp Ser Ala Phe Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu 520 525 Asp Lys Leu His Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp 535 540 Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln 550 555 Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val 570 565 Val Lys Leu Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn 590 585 Lys Lys Arg Thr Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu 600 Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp

Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile Val Ser Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu Asn Gly Gln Pro Glu Leu Glu Asn Phe Met Ala Ile Glu Glu Met Lys Lys His Gly Ser Thr His Val Gly Phe Pro Glu Asn Leu Thr Asn Gly Ala Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro Pro Arg Lys Ser Arg Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu Asn Glu Glu Tyr His Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe Cys Glu Glu Gln Asn Thr Gly Ile Leu His Asp Glu Ile Leu Ile His Glu Glu Lys Gln Ile Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser Leu Ser Cys Lys Lys Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu Arg Glu Glu Ile Ala Met Leu Arg Leu Glu Leu Asp Thr Met Lys His Gln Ser Gln Leu Pro Arg Thr His Met Val Val Glu Val Asp Ser Met

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Ser Asn Val Gly Thr 1090	1095	1100	0
Leu Arg Ser Lys Met 1105	1110	1115	1120
Arg Gly Ser Gly Lys 112	5	1130	1135
Ser Ala Met Lys Thr 1140		1145	1150
Cys Phe Pro Cys Cys 1155	116	0	1165
Gly Asp Tyr Asp Asp 1170	1175	1180	0
Gly Glu Asp Leu Asp 1185	1190	1195	1200
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Lys Asp Lys Gln Lys 1220		1225	1230
Asn Ser Glu Val Val 1235	124	0	1245
Val Leu Asp Asn Lys 1250	1255	126	0
Gln Glu Asp Glu Cys 1265	1270	1275	1280
Asn Ile Pro Asp Glu 128	5	1290	1295
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Ile Glu Ser Lys Asn 1315	132	0	1325
His Glu Gln Lys Gln 1330	1335	134	0
Asn Leu Asn Ala Leu 1345	1350	1355	1360
Val Cys Cys Gly Ser 136	5	1370	Leu Glu Gln Asn 1375
Ile Asp Val Ser Ser	Cla Non Tou		
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<213> Homo sapien

<400> 379

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Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His 135 Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met 155 150 Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala 165 170 Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu 185 Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr 205 200 Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met 215 Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn 235 230 Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys 250 245 Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly 265 260 Leu Thr Pro Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val 280 Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr 300 295 Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile 315 310 Val Ser Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu 330 325 Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His Wal 340 345 Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile 360 365 Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu 375 380 Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys 395 Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu 410 Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn 420 Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro 445 440 Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu 455 Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu 475 470 Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp 490 485 Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu 510 505 500 Asn Gly Gln Pro Glu Leu Glu Asn Phe Met Ala Ile Glu Glu Met Lys 525 520 Lys His Gly Ser Thr His Val Gly Phe Pro Glu Asn Leu Thr Asn Gly 535 Ala Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro Pro Arg Lys Ser 555

Arg Thr Pro Glu Ser Gln Gln Phe Prc Asp Thr Glu Asn Glu Glu Tyr 570 His Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe Cys Glu Glu Gln 585 Asn Thr Gly Ile Leu His Asp Glu Ile Leu Ile His Glu Glu Lys Gln 600 Ile Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser Leu Ser Cys Lys 620 615 Lys Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu Arg Glu Glu Ile 635 630 Ala Met Leu Arg Leu Glu Leu Asp Thr Met Lys His Gln Ser Gln Leu 650 645

<210> 380

<211> 671 <212> PRT

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Lys Lys Asp Arg Ala Trp Leu Arg Cys Pro Glu Ala Val Ala Gly Phe 50 55 60

Pro Leu Gly Ser Asp Cys Arg Glu Gly Gly Arg Gln Gly Cys Gly Gly 65 70 75 80

Ser Asp Asp Glu Asp Asp Leu Gly Val Ala Pro Gly Leu Ala Pro Ala 85 90 95

Trp Ala Leu Thr Gln Pro Pro Ser Gln Ser Pro Gly Pro Gln Ser Leu
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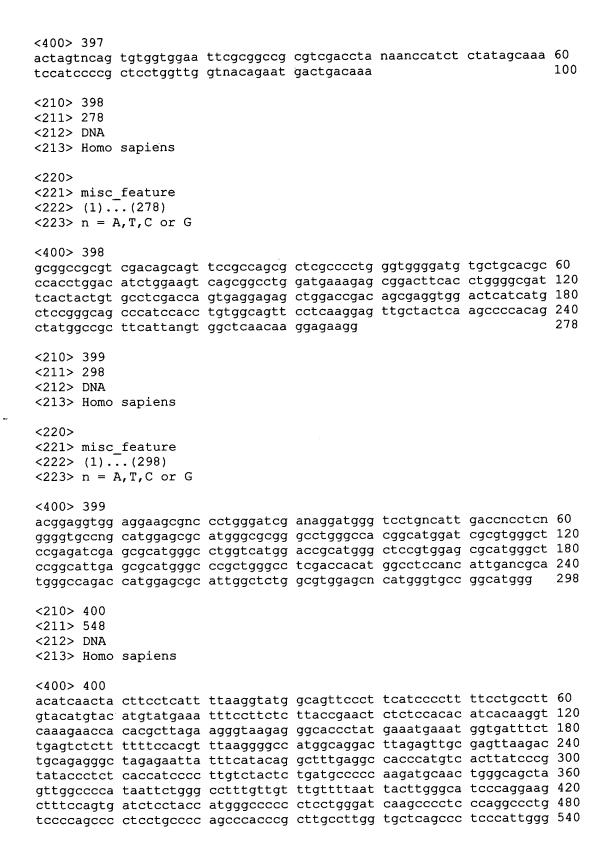
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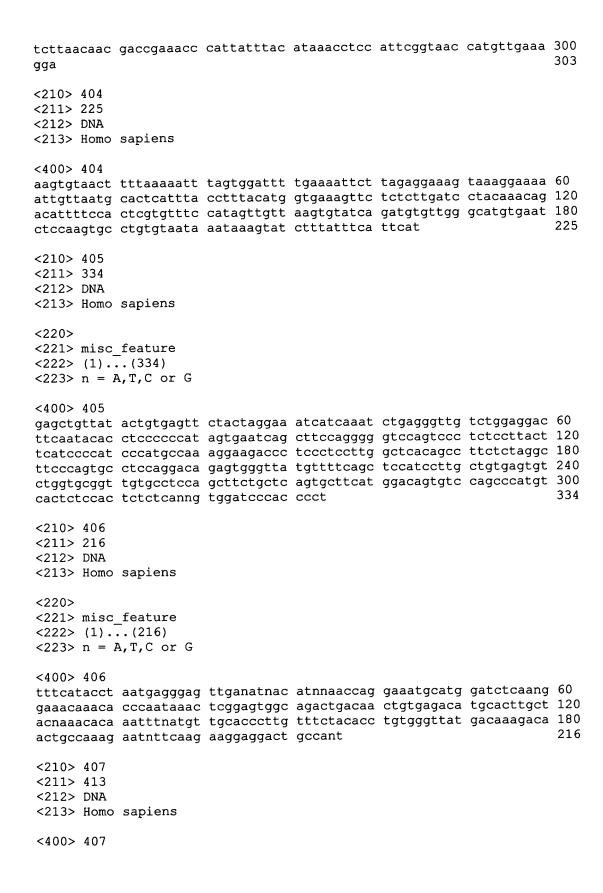
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gtttgaagat tgcctcttct acagcttctg agaattgtgt tatttcactt gccaagtgaa 180
ggaccccctc cccaacatgc cccagcccac ccctaagcat ggtcccttgt caccaggcaa 240
ccaggaaact gctacttgtg gacctcacca gagaccagga gggtttggtt agctcacagg 300
acttececca ecceagaaga ttageatece atactagaet catacteaae teaactagge 360
tcatactcaa ttgatggtta ttagacaatt ccatttcttt ctggttatta taaacagaaa 420
atctttcctc ttctcattac cagtaaaggc tcttggtatc tttctgttgg aatgatttct 480
atgaacttgt cttattttaa tggtgggttt tttttctggt
                                                                   520
<210> 389
<211> 365
<212> DNA
<213> Homo sapiens
<400> 389
cgttgcccca gtttgacaga aggaaaggcg gagcttattc aaagtctaga gggagtggag 60
gagttaaggc tggatttcag atctgcctgg ttccagccgc agtgtgccct ctgctccccc 120
aacgactttc caaataatct caccagegee ttecagetea ggegteetag aagegtettg 180
aagectatgg ccagetgtet ttgtgtteee teteaceege etgteeteae agetgagaet 240
cccaggaaac cttcagacta ccttcctctg ccttcagcaa ggggcgttgc ccacattctc 300
tgagggtcag tggaagaacc tagactccca ttgctagagg tagaaagggg aagggtgctg 360
                                                                   365
gggag
<210> 390
<211> 221
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(221)
<223> n = A, T, C or G
<400> 390
tgcctctcca tcctggcccc gacttctctg tcaggaaagt ggggatggac cccatctgca 60
tacacggntt ctcatgggtg tggaacatct ctgcttgcgg tttcaggaag gcctctggct 120
gctctangag tctgancnga ntcgttgccc cantntgaca naaggaaagg cggagcttat 180
tcaaagtcta gagggagtgg aggagttaag gctggatttc a
<210> 391
<211> 325
<212> DNA
<213> Homo sapiens
```

```
<220>
<221> misc feature
<222> (1)...(325)
<223> n = A, T, C or G
<400> 391
tggagcaggt cccgaggcct ccctagagcc tggggccgac tctgtgncga tgcangcttt 60
ctctcgcgcc cagcctggag ctgctcctgg catctaccaa caatcagncg aggcgagcag 120
tagccagggc actgctgcca acagccagtc cnnataccat catgtnaccc ggtgngctct 180
naanttngat ntccanagec ctacceaten tagttetget eteceacegg ntaccagece 240
cactgoccag gaatectaca gocagtacce tgtcccgacg tetetaceta ccagtacgat 300
                                                                   325
gagacctccg gctactacta tgacc
<210> 392
<211> 277
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(277)
<223> n = A, T, C or G
<400> 392
atattgttta actccttcct ttatatcttt taacattttc atggngaaag gttcacatct 60
agteteactt nggenagngn etectaettg agtetettee eeggeetgnn eeagtngnaa 120
antaccanga accgncatgn cttaanaacn ncctggtttn tgggttnntc aatgactgca 180
tgcagtgcac caccctgtcc actacgtgat gctgtaggat taaagtctca cagtgggcgg 240
                                                                   277
ctgaggatac agcgccgcgt cctgtgttgc tggggaa
<210> 393
<211> 566
<212> DNA
<213> Homo sapiens
<400> 393
actagtccag tgtggtggaa ttcgcggccg cgtcgacgga caggtcagct gtctggctca 60
gtgatctaca ttctgaagtt gtctgaaaat gtcttcatga ttaaattcag cctaaacgtt 120
ttgccgggaa cactgcagag acaatgctgt gagtttccaa ccttagccca tctgcgggca 180
gagaaggtct agtttgtcca tcagcattat catgatatca ggactggtta cttggttaag 240
gaggggtcta ggagatctgt cccttttaga gacaccttac ttataatgaa gtatttggga 300
gggtggtttt caaaagtaga aatgtcctgt attccgatga tcatcctgta aacattttat 360
catttattaa tcatccctgc ctgtgtctat tattatattc atatctctac gctggaaact 420
ttctgcctca atgtttactg tgcctttgtt tttgctagtt tgtgttgttg aaaaaaaaa 480
cattctctgc ctgagtttta atttttgtcc aaagttattt taatctatac aattaaaagc 540
                                                                   566
ttttgcctat caaaaaaaaa aaaaaa
<210> 394
<211> 384
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
```

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<222> (1)...(384)
<223> n = A, T, C or G
<400> 394
gaacatacat gtcccggcac ctgagctgca gtctgacatc atcgccatca cgggcctcgc 60
tgcaaattng gaccgggcca aggctggact gctggagcgt gtgaaggagc tacaggccna 120
gcaggaggac cgggctttaa ggagttttaa gctgagtgtc actgtagacc ccaaatacca 180
tcccaagatt atcgggagaa agggggcagt aattacccaa atccggttgg agcatgacgt 240
gaacatccag tttcctgata aggacgatgg gaaccagccc caggaccaaa ttaccatcac 300
agggtacgaa aagaacacag aagctgccag ggatgctata ctgagaattg tgggtgaact 360
tgagcagatg gtttctgagg acgt
<210> 395
<211> 399
<212> DNA
<213> Homo sapiens
<400> 395
ggcaaaactg tgtgacctca ataagacctc gcagatccaa ggtcaagtat cagaagtgac 60
tctgaccttg gactccaaga cctacatcaa cagcctggct atattagatg atgagccagt 120
tatcagaggt ttcatcattg cggaaattgt ggagtctaag gaaatcatgg cctctgaagt 180
attcacgtct ttccagtacc ctgagttctc tatagagttg cctaacacag gcagaattgg 240
ccagctactt gtctgcaatt gtatcttcaa gaataccctg gccatccctt tgactgacgt 300
caagttetet ttggaaagee tgggeatete eteactacag acetetgace atgggaeggt 360
                                                                    399
gcagcctggt gagaccatcc aatcccaaat aaaatgcac
<210> 396
<211> 403
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(403)
<223> n = A, T, C or G
<400> 396
tggagttntc agtgcaaaca agccataaag cttcagtagc aaattactgt ctcacagaaa 60
gacattttca acttctgctc cagctgctga taaaacaaat catgtgttta gcttgactcc 120
agacaaggac aacctgttcc ttcataactc tctagagaaa aaaaggagtt gttagtagat 180
actaaaaaaa gtggatgaat aatctggata tttttcctaa aaagattcct tgaaacacat 240
taggaaaatg gagggcctta tgatcagaat gctagaatta gtccattgtg ctgaagcagg 300
gtttagggga gggagtgagg gataaaagaa ggaaaaaaag aagagtgaga aaacctattt 360
                                                                    403
atcaaagcag gtgctatcac tcaatgttag gccctgctct ttt
<210> 397
<211> 100
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(100)
<223> n = A, T, C \text{ or } G
```



```
548
agcaggtt
<210> 401
<211> 355
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(355)
<223> n = A, T, C or G
<400> 401
actgtttcca tgttatgttt ctacacattg ctacctcagt gctcctggaa acttagcttt 60
tgatgtctcc aagtagtcca ccttcattta actctttgaa actgtatcat ctttgccaag 120
taagagtggt ggcctatttc agctgctttg acaaaatgac tggctcctga cttaacgttc 180
tataaatgaa tgtgctgaag caaagtgccc atggtggcgg cgaagaagan aaagatgtgt 240
tttgttttgg actctctgtg gtcccttcca atgctgnggg tttccaacca ggggaagggt 300
cccttttgca ttgccaagtg ccataaccat gagcactact ctaccatggn tctgc
<210> 402
<211> 407
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(407)
<223> n = A, T, C or G
<400> 402
atggggcaag ctggataaag aaccaagacc cactggagta tgctgtcttc aagaaaccca 60
tctcacatgc ggtggcatac ataggctcaa aataaaggaa tggagaaaaa tatttcaagc 120
aaatggaaaa cagaaaaaag caggtgttgc actcctactt tctgacaaaa cagactatgc 180
gaataaagat aaaaaagaga aggacattac aaaggtggtc ctgacctttg ataaatctca 240
ttgcttgata ccaacctggg ctgttttaat tgcccaaacc aaaaggataa tttgctgagg 300
ttgtggaget teteceetge agagagteee tgateteeca aaatttggtt gagatgtaag 360
gntgattttg ctgacaactc cttttctgaa gttttactca tttccaa
                                                                   407
<210> 403
<211> 303
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(303)
<223> n = A, T, C or G
<400> 403
cagtatttat agccnaactg aaaagctagt agcaggcaag tctcaaatcc aggcaccaaa 60
tcctaagcaa gagccatggc atggtgaaaa tgcaaaagga gagtctggcc aatctacaaa 120
tagagaacaa gacctactca gtcatgaaca aaaaggcaga caccaacatg gatctcatgg 180
gggattggat attgtaatta tagagcagga agatgacagt gatcgtcatt tggcacaaca 240
```



```
gctgacttgc tagtatcatc tgcattcatt gaagcacaag aacttcatgc cttgactcat 60
gtaaatgcaa taggattaaa aaataaattt gatatcacat ggaaacagac aaaaaatatt 120
gtacaacatt gcacccagtg tcagattcta cacctggcca ctcaggaagc aagagttaat 180
cccagaggtc tatgtcctaa tgtgttatgg caaatggatg tcatgcacgt accttcattt 240
ggaaaattgt catttgtcca tgtgacagtt gatacttatt cacatttcat atgggcaacc 300
tgccagacag gagaaagtct tcccatgtta aaagacattt attatcttgt tttcctgtca 360
tgggagttcc agaaaaagtt aaaacagaca atgggccagg ttctgtagta aag
<210> 408
<211> 183
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(183)
<223> n = A, T, C or G
<400> 408
ggagctngcc ctcaattcct ccatntctat gttancatat ttaatgtctt ttgnnattaa 60
tncttaacta gttaatcctt aaagggctan ntaatcctta actagtccct ccattgtgag 120
cattatectt ecagtatten cettetnttt tatttactee tteetggeta eccatgtaet 180
                                                                    183
ntt
<210> 409
<211> 250
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(250)
<223> n = A, T, C or G
<400> 409
cccacgcatg ataagctctt tatttctgta agtcctgcta ggaaatcatc aaatctgacg 60
gtggtttggg ggacctgaac aaacctcctg taattaatca gctttcagtt tctcccccta 120
gtccctcctt caacaacata ggaggatcct ccccttcttt ctgctcacgg ccttatctag 180
gcttcccagt gcccccagga cagcgtgggc tatgtttaca gcgcntcctt gctggggggg 240
                                                                    250
ggccntatgc
<210> 410
<211> 306
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(306)
<223> n = A, T, C or G
<400> 410
ggctggtttg caagaatgaa atgaatgatt ctacagctag gacttaacct tgaaatggaa 60
agtettgeaa teccatttge aggateegte tgtgeacatg cetetgtaga gageageatt 120
```

```
cccagggacc ttggaaacag ttggcactgt aaggtgcttg ctccccaaga cacatcctaa 180
aaggtgttgt aatggtgaaa accgcttcct tctttattgc cccttcttat ttatgtgaac 240
nactggttgg ctttttttgn atctttttta aactggaaag ttcaattgng aaaatgaata 300
tcntgc
<210> 411
<211> 261
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(261)
<223> n = A, T, C or G
<400> 411
agagatattn cttaggtnaa agttcataga gttcccatga actatatgac tggccacaca 60
ggatcttttg tatttaagga ttctgagatt ttgcttgagc aggattagat aaggctgttc 120
tttaaatgtc tgaaatggaa cagatttcaa aaaaaaaccc cacaatctag ggtgggaaca 180
aggaaggaaa gatgtgaata ggctgatggg caaaaaacca atttacccat cagttccagc 240
                                                                   261
cttctctcaa ggngaggcaa a
<210> 412
<211> 241
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(241)
<223> n = A, T, C or G
<400> 412
gttcaatgtt acctgacatt tctacaacac cccactcacc gatgtattcg ttgcccagtg 60
ggaacatacc agcctgaatt tggaaaaaat aattgtgttt cttgcccagg aaatactacg 120
actgactttg atggctccac aaacataacc cagtgtaaaa acagaagatg tggagggag 180
ctgggagatt tcactgggta cattgaattc ccaaactacc cangcaatta cccagccaac 240
                                                                   241
<210> 413
<211> 231
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(231)
<223> n = A, T, C or G
<400> 413
aactcttaca atccaagtga ctcatctgtg tgcttgaatc ctttccactg tctcatctcc 60
ctcatccaag tttctagtac cttctctttg ttgtgaagga taatcaaact gaacaacaaa 120
aagtttactc tcctcatttg gaacctaaaa actctcttct tcctgggtct gagggctcca 180
agaatccttg aatcanttct cagatcattg gggacaccan atcaggaacc t
```

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<210> 414
<211> 234
<212> DNA
<213> Homo sapiens
<400> 414
actgtccatg aagcactgag cagaagctgg aggcacaacg caccagacac tcacagcaag 60
gatggagctg aaaacataac ccactctgtc ctggaggcac tgggaagcct agagaaggct 120
gtgagccaag gagggagggt cttcctttgg catgggatgg ggatgaagta aggagaggga 180
ctggaccccc tggaagctga ttcactatgg ggggaggtgt attgaagtcc tcca
<210> 415
<211> 217
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(217)
<223> n = A, T, C or G
<400> 415
gcataggatt aagactgagt atcttttcta cattcttta actttctaag gggcacttct 60
caaaacacag accaggtagc aaatctccac tgctctaagg ntctcaccac cactttctca 120
cacctagcaa tagtagaatt cagtcctact tctgaggcca gaagaatggt tcagaaaaat 180
                                                                    217
antggattat aaaaaataac aattaagaaa aataatc
<210> 416
<211> 213
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(213)
<223> n = A, T, C or G
<400> 416
atgcatatnt aaagganact gcctcgcttt tagaagacat ctggnctgct ctctgcatga 60
ggcacagcag taaagctctt tgattcccag aatcaagaac tctccccttc agactattac 120
cgaatgcaag gtggttaatt gaaggccact aattgatgct caaatagaag gatattgact 180
                                                                    213
atattggaac agatggagtc tctactacaa aag
<210> 417
<211> 303
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(303)
<223> n = A, T, C or G
```

```
<400> 417
nagtetteag geceateagg gaagtteaca etggagagaa gteataeata tgtaetgtat 60
gtgggaaagg ctttactctg agttcaaatc ttcaagccca tcagagagtc cacactggag 120
agaagccata caaatgcaat gagtgtggga agagcttcag gagggattcc cattatcaag 180
ttcatctagt ggtccacaca ggagagaaac cctataaatg tgagatatgt gggaagggct 240
tcantcaaag ttcgtatctt caaatccatc ngaaggncca cagtatanan aaacctttta 300
agt
<210> 418
<211> 328
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(328)
<223> n = A, T, C or G
<400> 418
tttttggcgg tggtggggca gggacgggac angagtctca ctctgttgcc caggctggag 60
tgcacaggca tgatctcggc tcactacaac ccctgcctcc catgtccaag cgattcttgt 120
gcctcagcct tccctgtagc tagaattaca ggcacatgcc accacaccca gctagttttt 180
gtatttttag tagagacagg gtttcaccat gttggccagg ctggtctcaa actcctnacc 240
tcagnggtca ggctggtctc aaactcctga cctcaagtga tctgcccacc tcagcctccc 300
aaagtgctan gattacaggc cgtgagcc
<210> 419
<211> 389
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(389)
<223> n = A, T, C or G
<400> 419
cctcctcaag acggcctgtg gtccgcctcc cggcaaccaa gaagcctgca gtgccatatg 60
accectgage catggactgg agectgaaag geagegtaea eeetgeteet gatettgetg 120
cttgtttcct ctctgtggct ccattcatag cacagttgtt gcactgaggc ttgtgcaggc 180
cgagcaaggc caagctggct caaagagcaa ccagtcaact ctgccacggt gtgccaggca 240
ccggttctcc agccaccaac ctcactcgct cccgcaaatg gcacatcagt tcttctaccc 300
taaaggtagg accaaagggc atctgctttt ctgaagtcct ctgctctatc agccatcacg 360
                                                                   389
tggcagccac tcnggctgtg tcgacgcgg
<210> 420
<211> 408
<212> DNA
<213> Homo sapiens
<400> 420
gttcctccta actcctgcca gaaacagctc tcctcaacat gagagctgca cccctcctcc 60
tggccagggc agcaagcctt agccttggct tcttgtttct gcttttttc tggctagacc 120
gaagtgtact agccaaggag ttgaagtttg tgactttggt gtttcggcat ggagaccgaa 180
```

```
gtcccattga cacctttccc actgacccca taaaggaatc ctcatggcca caaggatttg 240
gccaactcac ccagctgggc atggagcagc attatgaact tggagagtat ataagaaaga 300
gatatagaaa attettgaat gagteetata aacatgaaca ggtttatatt egaageacag 360
acgttgaccg gactttgatg aagtgctatg acaaacctgg caagcccg
<210> 421
<211> 352
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(352)
<223> n = A, T, C or G
<400> 421
gctcaaaaat ctttttactg atnggcatgg ctacacaatc attgactatt acggaggcca 60
gaggagaatg aggcctggcc tgggagccct gtgcctacta naagcacatt agattatcca 120
ttcactqaca qaacaqqtct tttttgggtc cttcttctcc accacnatat acttgcagtc 180
ctccttcttq aaqattcttt ggcagttgtc tttgtcataa cccacaggtg tagaaacaag 240
ggtgcaacat gaaatttctg tttcgtagca agtgcatgtc tcacaagttg gcangtctgc 300
cactccgagt ttattgggtg tttgtttcct ttgagatcca tgcatttcct gg
<210> 422
<211> 337
<212> DNA
<213> Homo sapiens
<400> 422
atgccaccat gctggcaatg cagcgggcgg tcgaaggcct gcatatccag cccaagctgg 60
cgatgatcga cggcaaccgt tgcccgaagt tgccgatgcc agccgaagcg gtggtcaagg 120
gcgatagcaa ggtgccggcg atcgcggcgg cgtcaatcct ggccaaggtc agccgtgatc 180
gtgaaatggc agctgtcgaa ttgatctacc cgggttatgg catcggcggg cataagggct 240
atccgacacc ggtgcacctg gaagccttgc agcggctggg gccgacgccg attcaccgac 300
gcttcttccg ccggtacggc tggcctatga aaattat
<210> 423
<211> 310
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(310)
<223> n = A, T, C or G
<400> 423
gctcaaaaat ctttttactg atatggcatg gctacacaat cattgactat tagaggccag 60
aggagaatga ggcctggcct gggagccctg tgcctactan aagcncatta gattatccat 120
tcactgacag aacaggtctt ttttgggtcc ttcttctcca ccacgatata cttgcagtcc 180
teettettga agattetttg geagttgtet ttgteataac eeacaggtgt anaaacaagg 240
gtgcaacatg aaatttctgt ttcgtagcaa gtgcatgtct cacagttgtc aagtctgccc 300
                                                                   310
tccgagttta
```

```
<210> 424
<211> 370
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(370)
<223> n = A, T, C or G
<400> 424
gctcaaaaat ctttttactg ataggcatgg ctacacaatc attgactatt agaggccaga 60
ggagaatgag gcctggcctg ggagccctgt gcctactaga agcacattag attatccatt 120
cactgacaga acaggtettt tttgggteet tetteteeae cacgatatae ttgcagteet 180
ccttcttgaa gattctttgg cagttgtctt tgtcataacc cacaggtgta gaaacatcct 240
ggttgaatct cctggaactc cctcattagg tatgaaatag catgatgcat tgcataaagt 300
cacqaaggtg gcaaagatca caacgctgcc cagganaaca ttcattgtga taagcaggac 360
tccgtcgacg
<210> 425
<211> 216
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(216)
<223> n = A, T, C or G
<400> 425
taacaacnca acatcaaggn aaananaaca ggaatggntg actntgcata aatnggccga 120
anattatcca ttatnttaag ggttgacttc aggntacagc acacagacaa acatgcccag 180
                                                                216
gaggntntca ggaccgctcg atgtnttntg aggagg
<210> 426
<211> 596
<212> DNA
<213> Homo sapiens
<400> 426
cttccagtga ggataaccct gttgccccgg gccgaggttc tccattaggc tctgattgat 60
tggcagtcag tgatggaagg gtgttctgat cattccgact gccccaaggg tcgctggcca 120
gctctctgtt ttgctgagtt ggcagtagga cctaatttgt taattaagag tagatggtga 180
gctgtccttg tattttgatt aacctaatgg ccttcccagc acgactcgga ttcagctgga 240
gacatcacgg caacttttaa tgaaatgatt tgaagggcca ttaagaggca cttcccgtta 300
ttaggcagtt catctgcact gataacttct tggcagctga gctggtcgga gctgtggccc 360
aaacgcacac ttggcttttg gttttgagat acaactctta atcttttagt catgcttgag 420
ggtggatggc cttttcagct ttaacccaat ttgcactgcc ttggaagtgt agccaggaga 480
atacactcat atactcgtgg gcttagaggc cacagcagat gtcattggtc tactgcctga 540
gtcccgctgg tcccatccca ggaccttcca tcggcgagta cctgggagcc cgtgct
<210> 427
<211> 107
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<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(107)
<223> n = A, T, C \text{ or } G
<400> 427
gaagaattca agttaggttt attcaaaggg cttacngaga atcctanacc caggncccag 60
cccgggagca gccttanaga gctcctgttt gactgcccgg ctcagng
<210> 428
<211> 38
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(38)
<223> n = A, T, C or G
<400> 428
                                                                     38
gaacttccna anaangactt tattcactat tttacatt
<210> 429
<211> 544
<212> DNA
<213> Homo sapiens
<400> 429
ctttgctgga cggaataaaa gtggacgcaa gcatgacctc ctgatgaggg cgctgcattt 60
attgaagage ggetgeagee etgeggttea gattaaaate egagaattgt atagaegeeg 120
atatccacga actcttgaag gactttctga tttatccaca atcaaatcat cggttttcag 180
tttggatggt ggctcatcac ctgtagaacc tgacttggcc gtggctggaa tccactcgtt 240
gccttccact tcagttacac ctcactcacc atcctctcct gttggttctg tgctgcttca 300
agatactaag cccacatttg agatgcagca gccatctccc ccaattcctc ctgtccatcc 360
tgatgtgcag ttaaaaaatc tgccctttta tgatgtcctt gatgttctca tcaagcccac 420
gagtttagtt caaagcagta ttcagcgatt tcaagagaag ttttttattt ttgctttgac 480
acctcaacaa gttagagaga tatgcatatc cagggatttt ttgccaggtg gtaggagaga 540
                                                                     544
ttat
<210> 430
<211> 507
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(507)
<223> n = A, T, C \text{ or } G
<400> 430
cttatcncaa tggggctccc aaacttggct gtgcagtgga aactccgggg gaattttgaa 60
```

```
gaacactgac acccatcttc caccccgaca ctctgattta attgggctgc agtgagaaca 120
gagcatcaat ttaaaaagct gcccagaatg ttntcctggg cagcgttgtg atctttgccn 180
ccttcgtgac tttatgcaat gcatcatgct atttcatacc taatgaggga gttccaggag 240
attcaaccag gatgtttcta cncctgtggg ttatgacaaa gacaactgcc aaagaatntt 300
caagaaggag gactgcaagt atatcgtggt ggagaagaag gacccaaaaa agacctgttc 360
tgtcagtgaa tggataatct aatgtgcttc tagtaggcac agggctccca ggccaggcct 420
catteteete tggeetetaa tagteaatga ttgtgtagee atgeetatea gtaaaaagat 480
                                                                   507
ttttgagcaa aaaaaaaaa aaaaaaa
<210> 431
<211> 392
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(392)
<223> n = A, T, C or G
<400> 431
gaaaattcag aatggataaa aacaaatgaa gtacaaaata tttcagattt acatagcgat 60
aaacaagaaa gcacttatca ggaggactta caaatggaag tacactctan aaccatcatc 120
tatcatggct aaatgtgaga ttagcacagc tgtattattt gtacattgca aacacctaga 180
aagagatggg aaacaaaatc ccaggagttt tgtgtgtgga gtcctgggtt ttccaacaga 240
catcattcca gcattctgag attagggnga ttggggatca ttctggagtt ggaatgttca 300
acaaaagtga tgttgttagg taaaatgtac aacttctgga tctatgcaga cattgaaggt 360
                                                                   392
gcaatgagtc tggcttttac tctgctgttt ct
<210> 432
<211> 387
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(387)
<223> n = A, T, C or G
<400> 432
ggtatccnta cataatcaaa tatagctgta gtacatgttt tcattggngt agattaccac 60
aaatgcaagg caacatgtgt agatctcttg tcttattctt ttgtctataa tactgtattg 120
ngtagtccaa gctctcggna gtccagccac tgngaaacat gctcccttta gattaacctc 180
gtggacnetn ttgttgnatt gtetgaactg tagngeeetg tattttgett etgtetgnga 240
attctgttgc ttctggggca tttccttgng atgcagagga ccaccacaca gatgacagca 300
atctgaattg ntccaatcac agctgcgatt aagacatact gaaatcgtac aggaccggga 360
                                                                    387
acaacgtata gaacactgga gtccttt
<210> 433
<211> 281
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
```

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<222> (1)...(281)
 <223> n = A, T, C or G
 <400> 433
 ttcaactagc anagaanact gcttcagggn gtgtaaaatg aaaggcttcc acgcagttat 60
 ctgattaaag aacactaaga gagggacaag gctagaagcc gcaggatgtc tacactatag 120
 caggcnctat ttgggttggc tggaggagct gtggaaaaca tggagagatt ggcgctggag 180
 atcgccgtgg ctattcctcn ttgntattac accagngagg ntctctgtnt gcccactggt 240
 tnnaaaaccg ntatacaata atgatagaat aggacacaca t
 <210> 434
 <211> 484
 <212> DNA
 <213> Homo sapiens
 <400> 434
 ttttaaaata agcatttagt gctcagtccc tactgagtac tctttctctc ccctcctctg 60
 aatttaattc tttcaacttg caatttgcaa ggattacaca tttcactgtg atgtatattg 120
 tgttgcaaaa aaaaaaagt gtctttgttt aaaattactt ggtttgtgaa tccatcttgc 180
 tttttcccca ttggaactag tcattaaccc atctctgaac tggtagaaaa acatctgaag 240
 agctagtcta tcagcatctg acaggtgaat tggatggttc tcagaaccat ttcacccaga 300
 cageetgttt etateetgtt taataaatta gtttgggtte tetacatgea taacaaacce 360
 tgctccaatc tgtcacataa aagtctgtga cttgaagttt agtcagcacc cccaccaaac 420
 tttatttttc tatgtgtttt ttgcaacata tgagtgtttt gaaaataaag tacccatgtc 480
ttta
                                                                    484
<210> 435
<211> 424
<212> DNA
<213> Homo sapiens
<400> 435
gcgccgctca gagcaggtca ctttctgcct tccacgtcct ccttcaagga agccccatgt 60
gggtagcttt caatatcgca ggttcttact cctctgcctc tataagctca aacccaccaa 120
cgatcgggca agtaaacccc ctccctcgcc gacttcggaa ctggcgagag ttcagcgcag 180
atgggcctgt ggggagggg caagatagat gagggggagc ggcatggtgc ggggtgaccc 240
cttggagaga ggaaaaaggc cacaagaggg gctgccaccg ccactaacgg agatggccct 300
ggtagagacc tttgggggtc tggaacctct ggactcccca tgctctaact cccacactct 360
gctatcagaa acttaaactt gaggattttc tctgtttttc actcgcaata aattcagagc 420
aaac
                                                                   424
<210> 436
<211> 667
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(667)
<223> n = A, T, C or G
<400> 436
accttgggaa nactctcaca atataaaggg tcgtagactt tactccaaat tccaaaaagg 60
tectggeeat gtaateetga aagtttteee aaggtageta taaaateett ataagggtge 120
```

```
agcetettet ggaatteete tgattteaaa gteteaetet caagttettg aaaacgaggg 180
caqttcctqa aaggcaggta tagcaactga tcttcagaaa gaggaactgt gtgcaccggg 240
atgggctgcc agagtaggat aggattccag atgctgacac cttctggggg aaacagggct 300
qccaqqtttq tcataqcact catcaaagtc cggtcaacgt ctgtgcttcg aatataaacc 360
tgttcatgtt tataggactc attcaagaat tttctatatc tctttcttat atactctcca 420
agttcataat gctgctccat gcccagctgg gtgagttggc caaatccttg tggccatgag 480
gattccttta tggggtcagt gggaaaggtg tcaatgggac ttcggtctcc atgccgaaac 540
accaaagtca caaacttcaa ctccttggct agtacacttc ggtctagcca gaaaaaaagc 600
agaaacaaga agccaaggct aaggcttgct gccctgccag gaggaggggt gcagctctca 660
                                                                667
tgttgag
<210> 437
<211> 693
<212> DNA
<213> Homo sapiens
<400> 437
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acacagccag gtaaggaaag ctggattggc acactaggac tctaccatac cgggttttgt 120
taaagctcag gttaggaggc tgataagctt ggaaggaact tcagacagct ttttcagatc 180
aggtactcct ctattttcac ccctcttgct tctactctct ggcagtcaga cctgtgggag 300
gccatgggag aaagcagctc tctggatgtt tgtacagatc atggactatt ctctgtggac 360
cattleteca ggttacceta ggtgteacta ttggggggac agecageate tttagettte 420
atttgagttt ctgtctgtct tcagtagagg aaacttttgc tcttcacact tcacatctga 480
acacctaact gctgttgctc ctgaggtggt gaaagacaga tatagagctt acagtattta 540
tcctatttct aggcactgag ggctgtgggg taccttgtgg tgccaaaaca gatcctgttt 600
taaggacatg ttgcttcaga gatgtctgta actatctggg ggctctgttg gctctttacc 660
                                                                 693
ctgcatcatg tgctctcttg gctgaaaatg acc
<210> 438
<211> 360
<212> DNA
<213> Homo sapiens
<400> 438
ctgcttatca caatgaatgt tctcctgggc agcgttgtga tctttgccac cttcgtgact 60
ttatgcaatg catcatgcta tttcatacct aatgagggag ttccaggaga ttcaaccagg 120
atgtttctac acctgtgggt tatgacaaag acaactgcca aagaatcttc aagaaggagg 180
actgcaagta tatctggtgg agaagaagga cccaaaaaaag acctgttctg tcagtgaatg 240
gataatctaa tgtgcttcta gtaggcacag ggctcccagg ccaggcctca ttctcctctg 300
gcctctaata gtcaataatt gtgtagccat gcctatcagt aaaaagattt ttgagcaaac 360
<210> 439
<211> 431
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(431)
<223> n = A, T, C or G
<400> 439
```

tggccagggc gaagtgtact gtcccattga gccaactcac gatatagaaa	agcaagcctt agccaaggag cacctttccc ccagctgggc attcttgaat gactttgatg	agccttggct ttgaagtttg actgaccca atggagcagc gagtcctata	tcttgtttct tgactttggt taaaggaatc attatgaact aacatgaaca	gagagetgea getttttte gttteggeat etcatggeea tggagagtat ggtttatatt agecegtega	tggctagacc ggagaccgaa caaggatttg ataagaaaga cgaagcacag	120 180 240 300 360
<210> 440 <211> 523 <212> DNA <213> Homo	sapiens					
ggatcttttg tttaaatgtc aggaaggaaa cttctctcaa actggaaaac taaaaattaa acaaaaatca	tatttaagga tgaaatggaa gatgtgaata ggagaggcaa tgctactatc aacctctttg aactttacag	ttctgagatt cagatttcaa ggctgatggg agaaaggaga tgtttttata tgtcccttgg	ttgcttgagc aaaaaaaccc caaaaaacca tacagtggag tttctgttaa tcctggaaca tgtatgtaat	actatatgac aggattagat cacaatctag atttacccat acatctggaa aatatatgag tttatgttcc acatatagca cta	aaggctgttc ggtgggaaca cagttccagc agttttctcc gctacagaac ttttaaagaa	120 180 240 300 360 420
<210> 441 <211> 430 <212> DNA <213> Homo	sapiens					
tggccagggc gaagtgtact gtcccattga gccaactcac gatatagaaa	agcaagcctt agccaaggag cacctttccc ccagctgggc attcttgaat	agccttggct ttgaagtttg actgacccca atggagcagc gagtcctata	tcttgtttct tgactttggt taaaggaatc attatgaact aacatgaaca	gagagctgca gcttttttc gtttcggcat ctcatggcca tggagagtat ggtttatatt agcccgtcga	tggctagacc ggagaccgaa caaggatttg ataagaaaga cgaagcacag	120 180 240 300 360
<210> 442 <211> 362 <212> DNA <213> Homo	sapiens					
tttcctggaa cttcacttct atgtttagaa aatgaattaa	tgacaattat gatacttgta atggtcattt tgttttactt	attttaactt aattaatctt tacggaaaaa aatttatatt	tggtgggga ttattgcact ttagaaaaat gaactgtcaa	gctattctaa aagagttata tgttttgacc tctgataata tgacaaataa aattaaaagt	ggaccacagt attaagctat gtgcagaata aaattctttt	120 180 240 300

1

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<210> 443
<211> 624
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1) ... (624)
<223> n = A,T,C \text{ or } G
 ttttttttt gcaacacaat atacatcaca gtgaaatgtg taatccttgc aaattgcaag 60
 ttgaaagaat taaattcaga ggaggggaga gaaagagtac tcagtaggga ctgagcacta 120
 aatgettatt ttaaaagaaa tgtaaagage agaaageaat teaggetaee etgeettttg 180
 tgctggctag tactccggtc ggtgtcagca gcacgtggca ttgaacattg caatgtggag 240
 cccaaaccac agaaaatggg gtgaaattgg ccaactttct attaacttgg cttcctgttt 300
 tataaaatat tgtgaataat atcacctact tcaaagggca gttatgaggc ttaaatgaac 360
  taacgcctac aaaacactta aacatagata acataggtgc aagtactatg tatctggtac 420
  atggtaaaca teettattat taaagteaac getaaaatga atgtgtgtge atatgetaat 480
  agtacagaga gagggcactt aaaccaacta agggcctgga gggaaggttt cctggaaaga 540
  ngatgcttgt gctgggtcca aatcttggtc tactatgacc ttggccaaat tatttaaact 600
  ttgtccctat ctgctaaaca gatc
   <210> 444
   <211> 425
   <212> DNA
   <213> Homo sapiens
    <220>
    <221> misc_feature
    <222> (1) ... (425)
    <223> n = A,T,C or G
    gcacatcatt nntcttgcat tctttgagaa taagaagatc agtaaatagt tcagaagtgg 60
    gaagetttgt ccaggeetgt gtgtgaacce aatgttttge ttagaaatag aacaagtaag 120
     ttcattgcta tagcataaca caaaatttgc ataagtggtg gtcagcaaat ccttgaatgc 180
     tgcttaatgt gagaggttgg taaaatcctt tgtgcaacac tctaactccc tgaatgtttt 240
     gctgtgctgg gacctgtgca tgccagacaa ggccaagctg gctgaaagag caaccagcca 300
     cctctgcaat ctgccacctc ctgctggcag gatttgttt tgcatcctgt gaagagccaa 360
     ggaggcacca gggcataagt gagtagactt atggtcgacg cggccgcgaa tttagtagta 420
      gtaga
      <210> 445
      <211> 414
      <212> DNA
      <213> Homo sapiens
       <220>
       <221> misc_feature
       <222> (1) ... (414)
       <223> n = A, T, C \text{ or } G
       <400> 445
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catgtttatg nttttggatt actttgggca cctagtgttt ctaaatcgtc tatcattctt 60
         ttctgttttt caaaagcaga gatggccaga gtctcaacaa actgtatctt caagtctttg 120
         tgaaattett tgcatgtggc agattattgg atgtagttte etttaactag catataaate 180
         tggtgtgttt cagataaatg aacagcaaaa tgtggtggaa ttaccatttg gaacattgtg 240
         aatgaaaaat tgtgtctcta gattatgtaa caaataacta tttcctaacc attgatcttt 300
         ggatttttat aatcctactc acaaatgact aggcttctcc tcttgtattt tgaagcagtg 360
         tgggtgctgg attgataaaa aaaaaaaaag tcgacgcggc cgcgaattta gtag
        <210> 446
        <211> 631
        <212> DNA
        <213> Homo sapiens
       <220>
       <221> misc_feature
       <222> (1) ... (631)
       <223> n = A, T, C \text{ or } G
      <400> 446
      acaaattaga anaaagtgcc agagaacacc acataccttg tccggaacat tacaatggct 60
      totgcatgca tgggaagtgt gagcattcta tcaatatgca ggagccatct tgcaggtgtg 120
     atgctggtta tactggacaa cactgtgaaa aaaaggacta cagtgttcta tacgttgttc 180
     ccggtcctgt acgatttcag tatgtcttaa tcgcagctgt gattggaaca attcagattg 240
     ctgtcatctg tgtggtggtc ctctgcatca caagggccaa actttaggta atagcattgg 300
     actgagattt gtaaactttc caaccttcca ggaaatgccc cagaagcaac agaattcaca 360
     gacagaagca aaatacaggg cactacagtt cagacaatac aacaagagcg tccacgaggt 420
     taatctaaag ggagcatgtt tcacagtggc tggactaccg agagcttgga ctacacaata 480
    Cagtattata gacaaaagaa taagacaaga gatctacaca tgttgccttg catttgtggt 540
    aatctacacc aatgaaaaca tgtactacag ctatatttga ttatgtatgg atatatttga 600
    aatagtatac attgtcttga tgttttttct g
    <210> 447
    <211> 585
   <212> DNA
   <213> Homo sapiens
   <220>
   <221> misc_feature
  <222> (1) ... (585)
  <223> n = A, T, C \text{ or } G
  <400> 447
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 cctggccatg taatcctgaa agttttccca aggtagctat aaaatcctta taagggtgca 120
 gcctcttctg gaattcctct gatttcaaag tctcactctc aagttcttga aaacgagggc 180
 agttcctgaa aggcaggtat agcaactgat cttcagaaag aggaactgtg tgcaccggga 240
 tgggctgcca gagtaggata ggattccaga tgctgacacc ttctggggga aacagggctg 300
ccaggtttgt catagcactc atcaaagtcc ggtcaacgtc tgtgcttcga atataaacct 360
gttcatgttt ataggactca ttcaagaatt ttctatatct ctttcttata tactctccaa 420
gttcataatg ctgctccatg cccagctggg tgagttggcc aaatccttgt ggccatgagg 480
attectttat ggggtcagtg ggaaaggtgt caatgggact teggteteca tgeegaaaca 540
ccaaagtcac aaacttcaac teettggeta gtacaetteg gteta
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<211> 93
    <212> DNA
    <213> Homo sapiens
    <220>
    <221> misc_feature
    <222> (1)...(93)
    <223> n = A, T, C or G
   <400> 448
   tgctcgtggg tcattctgan nnccgaactg accntgccag ccctgccgan gggccnccat 60
   ggctccctag tgccctggag agganggggc tag
   <210> 449
   <211> 706
   <212> DNA
   <213> Homo sapiens
  <220>
  <221> misc_feature
  <222> (1)...(706)
  <223> n = A, T, C or G
  <400> 449
  ccaagttcat gctntgtgct ggacgctgga cagggggcaa aagcnnttgc tcgtgggtca 60
  ttctgancac cgaactgacc atgccagccc tgccgatggt cctccatggc tccctagtgc 120
  cctggagagg aggtgtctag tcagagagta gtcctggaag gtggcctctg ngaggagcca 180
  cggggacage atcctgcaga tggtcgggcg cgtcccattc gccattcagg ctgcgcaact 240
  gttgggaagg gcgatcggtg cgggcctctt cgctattacg ccagctggcg aaagggggat 300
  gtgctgcaag gcgattaagt tgggtaacgc cagggttttc ccagtcncga cgttgtaaaa 360
 cgacggccag tgaattgaat ttaggtgacn ctatagaaga gctatgacgt cgcatgcacg 420
 cgtacgtaag cttggatcct ctagagcggc cgcctactac tactaaattc gcggccgcgt 480
 cgacgtggga tccncactga gagagtggag agtgacatgt gctggacnct gtccatgaag 540
 cactgagcag aagetggagg cacaacgene cagacactea cagetactea ggaggetgag 600
 aacaggttga acctgggagg tggaggttgc aatgagctga gatcaggccn ctgcncccca 660
 gcatggatga cagagtgaaa ctccatctta aaaaaaaaa aaaaaa
 <210> 450
 <211> 493
 <212> DNA
 <213> Homo sapiens
<400> 450
gagacggagt gtcactctgt tgcccaggct ggagtgcagc aagacactgt ctaagaaaaa 60
acagttttaa aaggtaaaac aacataaaaa gaaatateet atagtggaaa taagagagte 120
aaatgaggct gagaacttta caaagggatc ttacagacat gtcgccaata tcactgcatg 180
agcctaagta taagaacaac ctttggggag aaaccatcat ttgacagtga ggtacaattc 240
caagtcaggt agtgaaatgg gtggaattaa actcaaatta atcctgccag ctgaaacgca 300
agagacactg tcagagagtt aaaaagtgag ttctatccat gaggtgattc cacagtcttc 360
tcaagtcaac acatctgtga actcacagac caagttctta aaccactgtt caaactctgc 420
tacacatcag aatcacctgg agagetttae aaacteeeat tgeegagggt egaegeggee 480
gcgaatttag tag
                                                                   493
<210> 451
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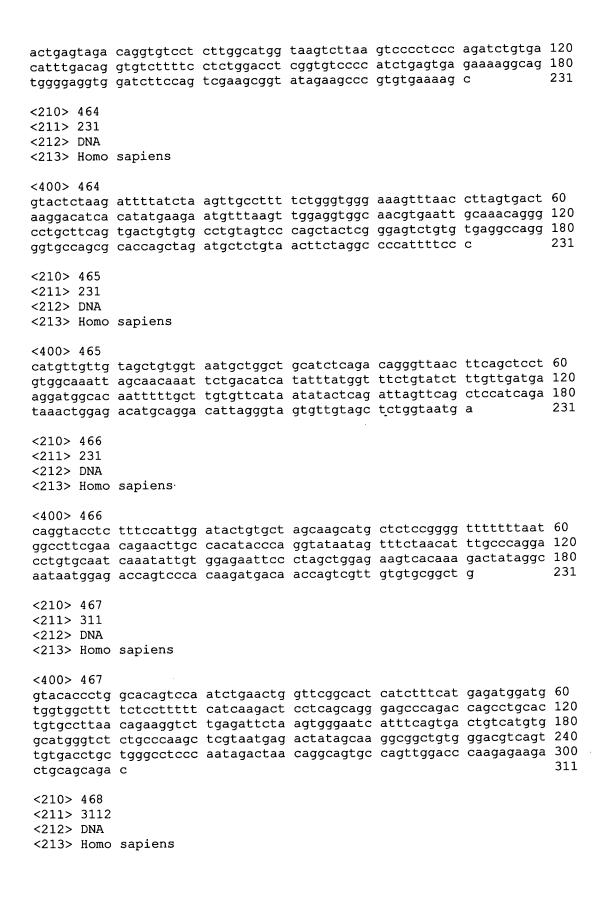
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<211> 501
   <212> DNA
   <213> Homo sapiens
   <220>
   <221> misc_feature
   <222> (1)...(501)
   <223> n = A, T, C or G
   <400> 451
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   ctcttcgcta ttacgccagc tggcgaaagg gggatgtgct gcaaggcgat taagttgggt 120
   aacgccaggg ttttcccagt cncgacgttg taaaacgacg gccagtgaat tgaatttagg 180
   tgacnctata gaagagctat gacgtcgcat gcacgcgtac gtaagcttgg atcctctaga 240
   gcggccgcct actactacta aattcgcggc cgcgtcgacg tgggatccnc actgagagag 300
   tggagagtga catgtgctgg acnetgteca tgaagcactg agcagaaget ggaggcacaa 360
   egenecagae acteacaget acteaggagg etgagaacag gttgaacetg ggaggtggag 420
   gttgcaatga gctgagatca ggccnctgcn ccccagcatg gatgacagag tgaaactcca 480
   tcttaaaaaa aaaaaaaaa a
                                                                      501
  <210> 452
  <211> 51
  <212> DNA
  <213> Homo sapiens
  <220>
- . <221> misc feature
  <222> (1)...(51)
  <223> n = A, T, C or G
  <400> 452
  agacggtttc accnttacaa cnccttttag gatgggnntt ggggagcaag c
                                                                      51
  <210> 453
  <211> 317
  <212> DNA
  <213> Homo sapiens
  <220>
  <221> misc feature
  <222> (1)...(317)
  <223> n = A, T, C or G
  <400> 453
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  ttcacccana cagcctgttt ctatcctgtt taataaatta gtttgggttc tctacatgca 180
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His Gly His Thr Ser Ile Pro Ser His His His Thr His Cys His Val

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Cys Pro Ala Ala Ser Glu Val Gly Gly Cys Ala Pro Ser Ser Trp Arg 85 90 95

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Gln His Ala Gln Ala Ser Val Leu Leu Cys Tyr Lys Trp Ser His 115 120 125

Ile Gly Glu Thr Ser Ser His Leu Arg Ser Lys Val Tyr Ala Ala Phe 130 135 140

Gly Gly Ser Ser Pro Cys Leu Lys Gly Leu Met Ser Leu Trp Ala Ser 145 150 155 160

Trp Leu Ser Arg Gly Arg Pro 165

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<211> 143

<212> PRT

<213> Homo sapiens

<400> 482

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Arg	Ala	Ser 35	Trp	Leu	Pro	Gly	Gly 40	Gly	Pro	Gln	Ala	Ile 45	Leu	Gly	Arg
Thr	Leu 50	Суѕ	Ser	Ser	Ala	Glu 55	Ser	Ser	Gln	Asp	Cys 60	His	Pro	Gly	Gly
Pro 65	Ser	Ile	Ala	Leu	Ala 70	Lys	Pro	Cys	Arg	Gly 75	Val	Trp	Leu	Leu	Phe 80
Glu	Pro	Ala	Trp	Pro 85	Pro	Trp	His	Ala	Arg 90	Ala	Pro	Gly	Ala	Gly 95	Thr
Leu	Leu	Arg	Val 100	Cys	Leu	Ser	Cys	Leu 105	Gly	Cys	His	Leu	Cys 110	Gly	Gly
Ala	Ser	Gly 115	Gly	Gly	Gly	Pro	Ala 120	Thr	Asn	Leu	Thr	Gln 125	Ser	Arg	Lys
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Gly	Phe	Leu 35	Val	Ala	Lys	Arg	Arg 40	Thr	Thr	Gly	Leu	Leu 45	Glu	Glu	Asp
Phe	Thr 50	Phe	Lys	Cys	Arg	Lys 55	Gln	Pro	Lys	Leu	Pro 60	Ser	Met	Arg	Leu
Ser 65	Leu	Leu	Trp	Pro	Trp 70	Arg	Asp	Leu	Lys	Phe 75	Val	Pro	Arg	Gln	Asp 80
Lys	Leu	Thr	Arg	Ser 85	Ser	Val	Ser	Val	Ala 90	Gly	Ala	Tyr	Ala	Cys 95	Arg
Ala	Gly	Pro	Gly 100	Trp	Leu	Lys	Glu	Gln 105	Pro	Ala	Thr	Ser	Ala 110	Arg	Val

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Ser Val Ala
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Leu Ser His Ser
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Thr Gly Phe Thr
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Leu Ala Ser Leu
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Lys Tyr Arg Gly
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 1
Leu Met Ile Ser
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Phe Pro Asn Gly
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Ser Val Arg Val
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                                                                        120
ctgtagagtt tttggaatng acctcagtag caatgcaatg agctgggtcc gccaggctcc
                                                                        180
agggaagggg ctggaatgga tcggagccat tgataattgt ccacantacg cgacctgggc
                                                                        240
                                                                        300
gaaaggccga ttnatnattt ccaaaacctn gaccacggtg gatttgaaaa tgaccagtcc
                                                                        360
gacaaccgag gacacggcca cctatttttg tggcagaatg aatactggta atagtggttg
gaagaatatt tggggcccag gcaccctggt caccgtntcc tcagggcaac ctaa
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                                                                        180
acagtetetg gatteteect cageaactae gacetgaact gggteegeea ggeteeaggg
                                                                        240
aaggggctgg aatggatcgg gatcattaat tatgttggta ggacggacta cgcgaactgg
                                                                        300
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ccgacaaccg aggacacggc cacctatttc tgtgccagag ggtggaagtg cgatgagtct
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aa
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                                                                        180
cagtctctgg aatcgacctc agtagctact gcatgagctg ggtccgccag gctccaggga
                                                                        240
aggggctgga atggatcgga atcattggta ctcctggtga cacatactac gcgaggtggg
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cgaaaggccg attcaccatc tccaaaacct cgaccacggt gcatntgaaa atcnccagtc
                                                                        360
cgacaaccga ggacacggcc acctatttct gtgccagaga tcttcgggat ggtagtagta
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Pro Glu Tyr Asn Arg Pro Leu Leu Ala Asn Asp Leu Met Leu Ile
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Tyr His Pro Ser Met Phe Cys Ala Gly Gly Gln Asp Gln Lys
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Ala Pro Cys Gly Gln Val Gly Val Pro Asx Val Tyr Thr Asn Leu
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Leu Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
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Pro Pro Pro Ala
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                                                 45
                             40
Val Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln
                         55
Trp Val Leu Ser Ala Thr His Cys Phe Gln Asn Ser Tyr Thr Ile Gly
                                         75
                     70
Leu Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met
                 85
Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu
                                                      110
                                 105
Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu
                             120
        115
Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala
                         135
                                             140
Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg
                                         155
                     150
Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu Glu
                                     170
                 165
Val Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys
                                 185
Ala Gly Gly Gln Xaa Gln Xaa Asp Ser Cys Asn Gly Asp Ser Gly
                             200
Gly Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly
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Lys Ala Pro Cys Gly Gln Val Gly Val Pro Gly Val Tyr Thr Asn Leu
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Cys Lys Phe Thr Glu Trp Ile Glu Lys Thr Val Gln Ala Ser
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                                                                       120
tcgcagccct ggcaggcggc actggtcatg gaaaacgaat tgttctgctc gggcgtcctg
                                                                       180
                                                                       240
gtgcatccgc agtgggtgct gtcagccgca cactgtttcc agaactccta caccatcggg
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<400> 526

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Asn Gly Glu Asp Cys Ser Pro His Ser Gln Pro Trp Gln Ala Ala Leu 35 40 45														
Val Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln 50 55 60														
Trp Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly 65 70 75 80														
Leu Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met 85 90 95														
Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu 100 105 110														
Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu 115 120 125														
Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala 130 135 140														
Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg 145 150 155 160														
Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu Glu 165 170 175														
Val Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys 180 185 190														
Ala Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly 195 200 205														
Gly Pro Leu Ile Cys Asn Gly Tyr Leu Gln Gly Leu Val Ser Phe Gly 210 215 220														
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tttctctgca	tgcttgcagc	cattgacctg	gccttatcca	catccaccat	gcctaagatc	240
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Pro Gly Leu Glu Lys Ala His Phe Trp Val Gly Phe Pro Leu Leu Ser 25

Met Tyr Val Val Ala Met Phe Gly Asn Cys Ile Val Val Phe Ile Val

Arg Thr Glu Arg Ser Leu His Ala Pro Met Tyr Leu Phe Leu Cys Met 55

Leu Ala Ala Ile Asp Leu Ala Leu Ser Thr Ser Thr Met Pro Lys Ile 75

Leu Ala Leu Phe Trp Phe Asp Ser Arg Glu Ile Ser Phe Glu Ala Cys

Leu Thr Gln Met Phe Phe Ile His Ala Leu Ser Ala Ile Glu Ser Thr 105 100

Ile Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys His Pro 115

Leu Arg His Ala Ala Val Leu Asn Asn Thr Val Thr Ala Gln Ile Gly 135

Ile Val Ala Val Val Arg Gly Ser Leu Phe Phe Phe Pro Leu Pro Leu 155 150

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Tyr	Cys	Val	His 180	Gln	Asp	Val	Met	Lys 185	Leu	Ala	Tyr	Ala	Asp 190	Thr	Leu		
Pro	Asn	Val 195	Val	Tyr	Gly	Leu	Thr 200	Ala	Ile	Leu	Leu	Val 205	Met	Gly	Val		
Asp	Val 210	Met	Phe	Ile	Ser	Leu 215	Ser	Tyr	Phe	Leu	Ile 220	Ile	Arg	Thr	Val		
Leu 225	Gln	Leu	Pro	Ser	Lys 230	Ser	Glu	Arg	Ala	Lys 235	Ala	Phe	Gly	Thr	Cys 240		
Val	Ser	His	Ile	Gly 245	Val	Val	Leu	Ala	Phe 250	Tyr	Val	Pro	Leu	Ile 255	Gly		
Leu	Ser	Val	Val 260	His	Arg	Phe	Gly	Asn 265	Ser	Leu	His	Pro	Ile 270	Val	Arg		
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aaaaaaaag ggcggcccgc tcgagtctag agggcccggt ttaaacccgc tgatcagcct 6060
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<210> 537
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<400> 537

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Met Leu Pro Val Tyr Gln Glu Val Lys Pro Asn Pro Leu Gln Asp Ala
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Asn Leu Cys Ser Arg Val Phe Phe Trp Trp Leu Asn Pro Leu Phe Lys 20 25 30

Ile Gly His Lys Arg Arg Leu Glu Glu Asp Asp Met Tyr Ser Val Leu

<sup>&</sup>lt;211> 1228

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Homo sapiens

40 45 35 Pro Glu Asp Arg Ser Gln His Leu Gly Glu Glu Leu Gln Gly Phe Trp Asp Lys Glu Val Leu Arg Ala Glu Asn Asp Ala Gln Lys Pro Ser Leu Thr Arg Ala Ile Ile Lys Cys Tyr Trp Lys Ser Tyr Leu Val Leu Gly Ile Phe Thr Leu Ile Glu Glu Ser Ala Lys Val Ile Gln Pro Ile Phe 105 100 Leu Gly Lys Ile Ile Asn Tyr Phe Glu Asn Tyr Asp Pro Met Asp Ser 120 115 Val Ala Leu Asn Thr Ala Tyr Ala Tyr Ala Thr Val Leu Thr Phe Cys 130 Thr Leu Ile Leu Ala Ile Leu His His Leu Tyr Phe Tyr His Val Gln 150 Cys Ala Gly Met Arg Leu Arg Val Ala Met Cys His Met Ile Tyr Arg 170 165 Lys Ala Leu Arg Leu Ser Asn Met Ala Met Gly Lys Thr Thr Thr Gly 180 Gln Ile Val Asn Leu Leu Ser Asn Asp Val Asn Lys Phe Asp Gln Val 200 Thr Val Phe Leu His Phe Leu Trp Ala Gly Pro Leu Gln Ala Ile Ala 215 210 Val Thr Ala Leu Leu Trp Met Glu Ile Gly Ile Ser Cys Leu Ala Gly 230 Met Ala Val Leu Ile Ile Leu Leu Pro Leu Gln Ser Cys Phe Gly Lys 245 255 Leu Phe Ser Ser Leu Arg Ser Lys Thr Ala Thr Phe Thr Asp Ala Arg 265 Ile Arg Thr Met Asn Glu Val Ile Thr Gly Ile Arg Ile Ile Lys Met 280 Tyr Ala Trp Glu Lys Ser Phe Ser Asn Leu Ile Thr Asn Leu Arg Lys 295 290 Lys Glu Ile Ser Lys Ile Leu Arg Ser Ser Cys Leu Arg Gly Met Asn Leu Ala Ser Phe Phe Ser Ala Ser Lys Ile Ile Val Phe Val Thr Phe

330 335 325 Thr Thr Tyr Val Leu Leu Gly Ser Val Ile Thr Ala Ser Arg Val Phe 345 Val Ala Val Thr Leu Tyr Gly Ala Val Arg Leu Thr Val Thr Leu Phe 360 Phe Pro Ser Ala Ile Glu Arg Val Ser Glu Ala Ile Val Ser Ile Arg 375 380 Arg Ile Gln Thr Phe Leu Leu Leu Asp Glu Ile Ser Gln Arg Asn Arg Gln Leu Pro Ser Asp Gly Lys Lys Met Val His Val Gln Asp Phe Thr 410 Ala Phe Trp Asp Lys Ala Ser Glu Thr Pro Thr Leu Gln Gly Leu Ser Phe Thr Val Arg Pro Gly Glu Leu Leu Ala Val Val Gly Pro Val Gly Ala Gly Lys Ser Ser Leu Leu Ser Ala Val Leu Gly Glu Leu Ala Pro 450 455 Ser His Gly Leu Val Ser Val His Gly Arg Ile Ala Tyr Val Ser Gln Gln Pro Trp Val Phe Ser Gly Thr Leu Arg Ser Asn Ile Leu Phe Gly 490 485 Lys Lys Tyr Glu Lys Glu Arg Tyr Glu Lys Val Ile Lys Ala Cys Ala 500 Leu Lys Lys Asp Leu Gln Leu Leu Glu Asp Gly Asp Leu Thr Val Ile 520 Gly Asp Arg Gly Thr Thr Leu Ser Gly Gly Gln Lys Ala Arg Val Asn 535 Leu Ala Arg Ala Val Tyr Gln Asp Ala Asp Ile Tyr Leu Leu Asp Asp Pro Leu Ser Ala Val Asp Ala Glu Val Ser Arg His Leu Phe Glu Leu 570 Cys Ile Cys Gln Ile Leu His Glu Lys Ile Thr Ile Leu Val Thr His 585 580 Gln Leu Gln Tyr Leu Lys Ala Ala Ser Gln Ile Leu Ile Leu Lys Asp Gly Lys Met Val Gln Lys Gly Thr Tyr Thr Glu Phe Leu Lys Ser Gly 206

	610					615					620				
Ile 625	Asp	Phe	Gly	Ser	Leu 630	Leu	Lys	Lys	Asp	Asn 635	Glu	Glu	Ser	Glu	Gln 640
Pro	Pro	Val	Pro	Gly 645	Thr	Pro	Thr	Leu	Arg 650	Asn	Arg	Thr	Phe	Ser 655	Glu
Ser	Ser	Val	Trp 660	Ser	Gln	Gln	Ser	Ser 665	Arg	Pro	Ser	Leu	Lys 670	Asp	Gly
Ala	Leu	Glu 675	Ser	Gln	Asp	Thr	Glu 680	Asn	Val	Pro	Val	Thr 685	Leu	Ser	Glu
Glu	Asn 690	Arg	Ser	Glu	Gly	Lys 695	Val	Gly	Phe	Gln	Ala 700	Tyr	Lys	Asn	Tyr
Phe 705	Arg	Ala	Gly	Ala	His 710	Trp	Ile	Val	Phe	Ile 715	Phe	Leu	Ile	Leu	Leu 720
Asn	Thr	Ala	Ala	Gln 725	Val	Ala	Tyr	Val	Leu 730	Gln	Asp	Trp	Trp	Leu 735	Ser
Tyr	Trp	Ala	Asn 740	Lys	Gln	Ser	Met	Leu 745	Asn	Val	Thr	Val	Asn 750	Gly	Gly
Gly	Asn	Val 755	Thr	Glu	Lys	Leu	Asp 760	Leu	Asn	Trp	Tyr	Leu 765	Gly	Ile	Tyr
Ser	Gly 770	Leu	Thr	Val	Ala	Thr 775	Val	Leu	Phe	Gly	Ile 780	Ala	Arg	Ser	Leu
Leu 785	Val	Phe	Tyr	Val	Leu 790	Val	Asn	Ser	Ser	Gln 795	Thr	Leu	His	Asn	Lys 800
Met	Phe	Glu	Ser	Ile 805	Leu	Lys	Ala	Pro	Val 810	Leu	Phe	Phe	Asp	Arg 815	Asn
Pro	Ile	Gly	Arg 820	Ile	Leu	Asn	Arg	Phe 825	Ser	Lys	Asp	Ile	Gly 830	His	Leu
Asp	Asp	Leu 835	Leu	Pro	Leu	Thr	Phe 840	Leu	Asp	Phe	Ile	Gln 845	Thr	Leu	Leu
Gln	Val 850	Val	Gly	Val	Val	Ser 855	Val	Ala	Val	Ala	Val 860	Ile	Pro	Trp	Ile
Ala 865	Ile	Pro	Leu	Val	Pro 870	Leu	Gly	Ile	Ile	Phe 875	Ile	Phe	Leu	Arg	Arg 880
Tyr	Phe	Leu	Glu	Thr 885	Ser	Arg	Asp	Val	Lys 890	Arg	Leu	Glu	Ser	Thr 895	Thr
Arg	Ser	Pro	Val	Phe	Ser	His	Leu	Ser	Ser	Ser	Leu	Gln	Gly	Leu	Trp

			900					905					910		
Thr	Ile	Arg 915	Ala	Tyr	Lys	Ala	Glu 920	Glu	Arg	Cys	Gln	Glu 925	Leu	Phe	Asp
Ala	His 930	Gln	Asp	Leu	His	Ser 935	Glu	Ala	Trp	Phe	Leu 940	Phe	Leu	Thr	Thr
Ser 945	Arg	Trp	Phe	Ala	Val 950	Arg	Leu	Asp	Ala	Ile 955	Cys	Ala	Met	Phe	Val 960
Ile	Ile	Val	Ala	Phe 965	Gly	Ser	Leu	Ile	Leu 970	Ala	Lys	Thr	Leu	Asp 975	Ala
Gly	Gln	Val	Gly 980	Leu	Ala	Leu	Ser	Tyr 985	Ala	Leu	Thr	Leu	Met 990	Gly	Met
Phe	Gln	Trp 995	Cys	Val	Arg	Gln	Ser 1000		Glu	Val	Glu	Asn 1005		Met	Ile
Ser	Val 1010		Arg	Val	Ile	Glu 1015		Thr	Asp	Leu	Glu 1020		Glu	Ala	Pro
Trp 1025		Tyr	Gln	Lys	Arg 1030		Pro	Pro	Ala	Trp 1035		His	Glu	Gly	Val 1040
Ile	Ile	Phe	Asp	Asn 104!	Val 5	Asn	Phe	Met	Tyr 1050		Pro	Gly	Gly	Pro 105	
Val	Leu	Lys	His 1060		Thr	Ala	Leu	Ile 106		Ser	Gln	Glu	Lys 1070		Gly
Ile	Val	Gly 1075		Thr	Gly	Ala	Gly 1080		Ser	Ser	Leu	Ile 108!		Ala	Leu
Phe	Arg 1090		Ser	Glu	Pro	Glu 109		Lys	Ile	Trp	Ile 110		Lys	Ile	Leu
Thr 1105		Glu	Ile	Gly	Leu 1110		Asp	Leu	Arg	Lys 111		Met	Ser	Ile	Ile 1120
Pro	Gln	Glu	Pro	Val 112	Leu 5	Phe	Thr	Gly	Thr 1130		Arg	Lys	Asn	Leu 113	Asp 5
Pro	Phe	Asn	Glu 114		Thr	Asp	Glu	Glu 114		Trp	Asn	Ala	Leu 115		Glu
Val	Gln	Leu 115		Glu	Thr	Ile	Glu 116		Leu	Pro	Gly	Lys 116		Asp	Thr
Glu	Leu 1170		Glu	Ser	Gly	Ser 117		Phe	Ser	Val	Gly 118		Arg	Gln	Leu
Val	Cys	Leu	Ala	Arg	Ala	Ile	Leu	Arg	Lys	Asn	Gln	Ile	Leu	Ile	Ile

1185 1190 1195 1200

Asp Glu Ala Thr Ala Asn Val Asp Pro Arg Thr Asp Glu Leu Ile Gln 1205 1210 1215

Lys Lys Ser Gly Arg Asn Leu Pro Thr Ala Pro Cys 1220 1225

<210> 538

<211> 1261

<212> PRT

<213> Homo sapiens

<400> 538

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Leu Gln Gly Phe Trp Asp Lys Glu Val Leu Arg Ala Glu Asn Asp Ala 20 25 30

Gln Lys Pro Ser Leu Thr Arg Ala Ile Ile Lys Cys Tyr Trp Lys Ser 35 40 45

Tyr Leu Val Leu Gly Ile Phe Thr Leu Ile Glu Glu Ser Ala Lys Val 50 55 60

Ile Gln Pro Ile Phe Leu Gly Lys Ile Ile Asn Tyr Phe Glu Asn Tyr 65 70 75 80

Asp Pro Met Asp Ser Val Ala Leu Asn Thr Ala Tyr Ala Tyr Ala Thr 85 90 95

Val Leu Thr Phe Cys Thr Leu Ile Leu Ala Ile Leu His His Leu Tyr 100 105 110 .

Phe Tyr His Val Gln Cys Ala Gly Met Arg Leu Arg Val Ala Met Cys 115 120 125

His Met Ile Tyr Arg Lys Ala Leu Arg Leu Ser Asn Met Ala Met Gly
130 135 140

Lys Thr Thr Thr Gly Gln Ile Val Asn Leu Leu Ser Asn Asp Val Asn 145 150 155 160

Lys Phe Asp Gln Val Thr Val Phe Leu His Phe Leu Trp Ala Gly Pro 165 170 175

Leu Gln Ala Ile Ala Val Thr Ala Leu Leu Trp Met Glu Ile Gly Ile 180 185 190

Ser Cys Leu Ala Gly Met Ala Val Leu Ile Ile Leu Leu Pro Leu Gln 195 200 205

Ser Cys Phe Gly Lys Leu Phe Ser Ser Leu Arg Ser Lys Thr Ala Thr

	210					215					220				
Phe 225	Thr	Asp	Ala	Arg	Ile 230	Arg	Thr	Met	Asn	Glu 235	Val	Ile	Thr	Gly	Ile 240
Arg	Ile	Ile	Lys	Met 245	Tyr	Ala	Trp	Glu	Lys 250	Ser	Phe	Ser	Asn	Leu 255	Ile
Thr	Asn	Leu	Arg 260	Lys	Lys	Glu	Ile	Ser 265	Lys	Ile	Leu	Arg	Ser 270	Ser	Cys
Leu	Arg	Gly 275	Met	Asn	Leu	Ala	Ser 280	Phe	Phe	Ser	Ala	Ser 285	Lys	Ile	Ile
Val	Phe 290	Val	Thr	Phe	Thr	Thr 295	Tyr	Val	Leu	Leu	Gly 300	Ser	Val	Ile	Thr
Ala 305	Ser	Arg	Val	Phe	Val 310	Ala	Val	Thr	Leu	Tyr 315	Gly	Ala	Val	Arg	Leu 320
Thr	Val	Thr	Leu	Phe 325	Phe	Pro	Ser	Ala	Ile 330	Glu	Arg	Val	Ser	Glu 335	Ala
Ile	Val	Ser	Ile 340	Arg	Arg	Ile	Gln	Thr 345	Phe	Leu	Leu	Leu	Asp 350	Glu	Ile
Ser	Gln	Arg 355	Asn	Arg	Gln	Leu	Pro 360	Ser	Asp	Gly	Lys	Lys 365	Met	Val	His
Val	Gln 370	Asp	Phe	Thr	Ala	Phe 375	Trp	Asp	Lys	Ala	Ser 380	Glu	Thr	Pro	Thr
Leu 385	Gln	Gly	Leu	Ser	Phe 390	Thr	Val	Arg	Pro	Gly 395	Glu	Leu	Leu	Ala	Val 400
Val	Gly	Pro	Val	Gly 405	Ala	Gly	Lys	Ser	Ser 410	Leu	Leu	Ser	Ala	Val 415	Leu
Gly	Glu	Leu	Ala 420	Pro	Ser	His	Gly	Leu 425	Val	Ser	Val	His	Gly 430	Arg	Ile
Ala	Tyr	Val 435	Ser	Gln	Gln	Pro	Trp 440	Val	Phe	Ser	Gly	Thr 445	Leu	Arg	Ser
Asn	Ile 450	Leu	Phe	Gly	Lys	Lys 455	Tyr	Glu	Lys	Glu	Arg 460	Tyr	Glu	Lys	Val
Ile 465	Lys	Ala	Cys	Ala	Leu 470	Lys	Lys	Asp	Leu	Gln 475	Leu	Leu	Glu	Asp	Gly 480
Asp	Leu	Thr	Val	Ile 485	Gly	Asp	Arg	Gly	Thr 490	Thr	Leu	Ser	Gly	Gly 495	Gln
Lys	Ala	Arg	Val	Asn	Leu	Ala	Arg	Ala	Val	Tyr	Gln	Asp	Ala	Asp	Ile

505 510 500 Tyr Leu Leu Asp Asp Pro Leu Ser Ala Val Asp Ala Glu Val Ser Arg 515 His Leu Phe Glu Leu Cys Ile Cys Gln Ile Leu His Glu Lys Ile Thr 535 Ile Leu Val Thr His Gln Leu Gln Tyr Leu Lys Ala Ala Ser Gln Ile Leu Ile Leu Lys Asp Gly Lys Met Val Gln Lys Gly Thr Tyr Thr Glu . 565 570 Phe Leu Lys Ser Gly Ile Asp Phe Gly Ser Leu Leu Lys Lys Asp Asn Glu Glu Ser Glu Gln Pro Pro Val Pro Gly Thr Pro Thr Leu Arg Asn 595 Arg Thr Phe Ser Glu Ser Ser Val Trp Ser Gln Gln Ser Ser Arg Pro 620 615 Ser Leu Lys Asp Gly Ala Leu Glu Ser Gln Asp Thr Glu Asn Val Pro 630 635 Val Thr Leu Ser Glu Glu Asn Arg Ser Glu Gly Lys Val Gly Phe Gln 645 Ala Tyr Lys Asn Tyr Phe Arg Ala Gly Ala His Trp Ile Val Phe Ile 665 Phe Leu Ile Leu Leu Asn Thr Ala Ala Gln Val Ala Tyr Val Leu Gln Asp Trp Trp Leu Ser Tyr Trp Ala Asn Lys Gln Ser Met Leu Asn Val 695 Thr Val Asn Gly Gly Gly Asn Val Thr Glu Lys Leu Asp Leu Asn Trp 715 Tyr Leu Gly Ile Tyr Ser Gly Leu Thr Val Ala Thr Val Leu Phe Gly Ile Ala Arg Ser Leu Leu Val Phe Tyr Val Leu Val Asn Ser Ser Gln 745 Thr Leu His Asn Lys Met Phe Glu Ser Ile Leu Lys Ala Pro Val Leu 755 Phe Phe Asp Arg Asn Pro Ile Gly Arg Ile Leu Asn Arg Phe Ser Lys Asp Ile Gly His Leu Asp Asp Leu Leu Pro Leu Thr Phe Leu Asp Phe

Ile Gln Thr Leu Leu Gln Val Val Gly Val Val Ser Val Ala Val Ala Val Ile Pro Trp Ile Ala Ile Pro Leu Val Pro Leu Gly Ile Ile Phe Ile Phe Leu Arg Arg Tyr Phe Leu Glu Thr Ser Arg Asp Val Lys Arg Leu Glu Ser Thr Thr Arg Ser Pro Val Phe Ser His Leu Ser Ser Ser Leu Gln Gly Leu Trp Thr Ile Arg Ala Tyr Lys Ala Glu Glu Arg Cys Gln Glu Leu Phe Asp Ala His Gln Asp Leu His Ser Glu Ala Trp Phe Leu Phe Leu Thr Thr Ser Arg Trp Phe Ala Val Arg Leu Asp Ala Ile Cys Ala Met Phe Val Ile Ile Val Ala Phe Gly Ser Leu Ile Leu Ala Lys Thr Leu Asp Ala Gly Gln Val Gly Leu Ala Leu Ser Tyr Ala Leu Thr Leu Met Gly Met Phe Gln Trp Cys Val Arg Gln Ser Ala Glu Val Glu Asn Met Met Ile Ser Val Glu Arg Val Ile Glu Tyr Thr Asp Leu Glu Lys Glu Ala Pro Trp Glu Tyr Gln Lys Arg Pro Pro Pro Ala Trp Pro His Glu Gly Val Ile Ile Phe Asp Asn Val Asn Phe Met Tyr Ser Pro Gly Gly Pro Leu Val Leu Lys His Leu Thr Ala Leu Ile Lys Ser Gln Glu Lys Val Gly Ile Val Gly Arg Thr Gly Ala Gly Lys Ser Ser Leu Ile Ser Ala Leu Phe Arg Leu Ser Glu Pro Glu Gly Lys Ile Trp Ile Asp Lys Ile Leu Thr Thr Glu Ile Gly Leu His Asp Leu Arg Lys Lys Met Ser Ile Ile Pro Gln Glu Pro Val Leu Phe Thr Gly Thr Met

<223> Made in a lab

1080 1085 1075 Arg Lys Asn Leu Asp Pro Phe Asn Glu His Thr Asp Glu Glu Leu Trp 1100 1095 1090 Asn Ala Leu Gln Glu Val Gln Leu Lys Glu Thr Ile Glu Asp Leu Pro 1115 1110 Gly Lys Met Asp Thr Glu Leu Ala Glu Ser Gly Ser Asn Phe Ser Val 1130 1125 Gly Gln Arg Gln Leu Val Cys Leu Ala Arg Ala Ile Leu Arg Lys Asn 1140 1145 Gln Ile Leu Ile Ile Asp Glu Ala Thr Ala Asn Val Asp Pro Arg Thr Asp Glu Leu Ile Gln Lys Lys Ile Arg Glu Lys Phe Ala His Cys Thr 1170 1175 Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile Ile Asp Ser Asp Lys 1195 1190 1185 Ile Met Val Leu Asp Ser Gly Arg Leu Lys Glu Tyr Asp Glu Pro Tyr 1205 1210 Val Leu Leu Gln Asn Lys Glu Ser Leu Phe Tyr Lys Met Val Gln Gln 1225 1220 Leu Gly Lys Ala Glu Ala Ala Ala Leu Thr Glu Thr Ala Lys Gln Arg 1245 1240 Trp Gly Phe Thr Met Leu Ala Arg Leu Val Ser Asn Ser 1260 1250 1255 <210> 539 <211> 10 <212> PRT <213> Artificial Sequence <220> <223> Made in a lab <400> 539 Cys Leu Ser His Ser Val Ala Val Val Thr <210> 540 <211> 9 <212> PRT <213> Artificial Sequence <220>

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Leu Ala Gly Leu Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu
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Thr Gln Val Val Phe Asp Lys Ser Asp Leu Ala Lys Tyr Ser Ala
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Phe Met Gly Ser Ile Val Gln Leu Ser Gln Ser Val
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Thr Tyr Val Pro Pro Leu Leu Glu Val Gly Val Glu Glu Lys Phe
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Met Thr
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Met Asp Arg Leu Val Gl<br/>n Arg Phe Gly Thr Arg Ala Val Tyr Leu Ala 5 $\phantom{0}$ 10<br/>  $\phantom{0}$ 15

Ser Val

<210> 546

<211> 29

<212> PRT

<213> Homo sapiens

<400> 546

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Thr Glu Ala Arg Arg His Tyr Asp Glu Gly Val Arg Met 20 25

<210> 547

<211> 58

<212> PRT

<213> Homo sapiens

<400> 547

Val Ala Glu Glu Ala Ala Leu Gly Pro Thr Glu Pro Ala Glu Gly Leu
5 10 15

Ser Ala Pro Ser Leu Ser Pro His Cys Cys Pro Cys Arg Ala Arg Leu 20 25 30

Ala Phe Arg Asn Leu Gly Ala Leu Leu Pro Arg Leu His Gln Leu Cys 35 40 45 .

Cys Arg Met Pro Arg Thr Leu Arg Arg Leu 50 55

<210> 548

<211> 18

<212> PRT

<213> Homo sapiens

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Glu Cys

<210> 549

<211> 18

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Gln Ala
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<211> 14
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<213> Homo sapiens
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Ser Asp His Trp Arg Gly Arg Tyr Gly Arg Arg Pro Phe
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       <212> PRT
       <213> Artificial Sequence
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       <223> Made in a lab
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tcataccagt ccacggacta ttatgaacca caccacacag gaggaggtga gcactaggca 180
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ttttacacat gcctagtgat gcttcatgga caaggcttgg ctctgttgag tccaactaac 540
ctacctgaga ttctgagatt tctcttcaat ggcttcctgt gagctagagt ttgaaaatat 600
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ggtcactcaa ggggccaacc acagctggga gccactgctc aggggaaggt tcatatggga 720
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agttaggaat taaacccagt attgtgtgaa tctaaagcct aacttttttc tctttatcac 2520
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<210> 553
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<400> 553

Ser Ile Cys Asn Met Thr Cys Ala Ser Val Phe Phe Cys Asp Gln Lys 5 10 15

Phe Leu Thr Phe Ser Phe Leu Ser Met Val Glu Pro Pro Arg Ala Gly
20 25 30

Val Leu Asn Ser Gln Ala Thr Asp Ser Tyr Gln Ser Thr Asp Tyr Tyr 35 40 45

Glu Pro His His Thr Gly Gly Glu His 50 55

<210> 554

<211> 59

<212> PRT

<213> Homo sapiens

<400> 554

<sup>&</sup>lt;211> 58

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Homo sapiens

Leu Gln Lys Asn Lys Leu Arg Ala Ser Thr Asp Ser Thr Leu Trp Ile
5 10 15

Cys Ala Ala Glu Ala Ser Thr Lys Pro Tyr Phe Tyr Thr Cys Leu Val 20 25 30

Met Leu His Gly Gln Gly Leu Ala Leu Leu Ser Pro Thr Asn Leu Pro 35 40 45

Glu Ile Leu Arg Phe Leu Phe Asn Gly Phe Leu
50 55

<210> 555

<211> 71

<212> PRT

<213> Homo sapiens

<400> 555

Leu Gly Arg Phe Ser Leu Ser Cys Lys Ser Gly His Ser Arg Gly Gln 5 10 15

Pro Gln Leu Gly Ala Thr Ala Gln Gly Lys Val His Met Gly Leu Ser 20 25 30

Thr Ala Gln Gly Ser Ile Gln Asp Ile Lys Val Pro His Ser Ile Asp 35 40 45

Leu Val Ala Lys Lys Lys Gln Thr Leu Ile Ser Phe Cys His Pro 50 55 60

Ser Asp Pro Leu Glu Leu Leu 65 70

<210> 556

<211> 81

<212> PRT

<213> Homo sapiens

<400> 556

Asn His Pro Glu Gln Gly Ser Ser Thr Pro Arg Pro Gln Thr His Thr 5 10 15

Ser Pro Arg Thr Ile Met Asn His Thr Thr Gln Glu Glu Val Ser Thr 20 25 30

Arg Gln Ala Lys Glu Ala Ser Pro Val Leu Thr Ala Thr Arg His Gly
35 40 45

Ser Tyr Tyr Ser Leu Asn Ser Ala Ser Thr Gln Ile Ser Asp Asn Ile 50 55 60

Arg Asn Ser Leu Glu His Glu Pro Cys Cys Glu Leu Pro Ile Arg Arg

80 75 70 65 Ile <210> 557 <211> 54 <212> PRT <213> Homo sapiens <400> 557 Ser Leu Ser Ala Thr Pro Leu Thr Leu Trp Asn Ser Ser Asp Pro Leu Glu Gln Ala Tyr Leu Ile Ser Ala Arg Glu Lys Thr Asn Asn Gly Leu Lys Gly Ser Leu Thr Met Lys Val Ser Ala Asn Ser Trp Leu Arg Cys 40 Gly Phe His Ile Arg Phe 50 <210> 558 <211> 77 <212> PRT <213> Homo sapiens <220> <221> VARIANT <222> (1)...(77) <223> Xaa = Any amino acid <400> 558 Asn Asp Arg Asp Arg Asn Ser Asn Lys Val Ile Xaa Lys Ala Asn Leu Ile Tyr Phe Thr Asn Leu Thr Ser Cys Leu Ser Val Gln Asn Gln Thr Phe Thr Cys Thr Lys Arg His Lys His Leu Gln Cys Ser Ser Val His Leu Cys Lys Ile Pro Pro Arg Leu Lys Gly Arg Asp Lys Lys Lys 50 Pro Ser Tyr Leu Ser Gly Val Leu His Ser Arg Ser Tyr

<210> 559 <211> 50

<212> PRT <213> Homo sapiens

<400> 559

Thr Leu Pro Pro Leu Arg Ser Val Ile Thr Leu Glu Thr His Trp Ser 5 10 15

Thr Asn Pro Val Val Asn Cys Leu Ser Glu Gly Ser Arg Leu Cys Ala 20 25 30

Ser Tyr Glu Asn Leu Met Pro Asp Asp Leu Ser Leu Ser His Phe Ala 35 40 45

Pro Arg

<210> 560

<211> 56

<212> PRT

<213> Homo sapiens

<400> 560

Ile Gly Ser Leu Lys Gly Pro Thr Thr Ala Gly Ser His Cys Ser Gly
5 10 15

Glu Gly Ser Tyr Gly Thr Phe Tyr Cys Pro Arg Phe Tyr Thr Gly Tyr

Lys Gly Ala Ser Gln Tyr Arg Ser Gly Ser Lys Glu Glu Glu Thr Asn 35 40 45

Thr Asp Leu Phe Leu Pro Pro Leu 50 55

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<213> Homo sapiens

<220>

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<223> Xaa = Any amino acid

<400> 561

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5 10 15

Gly Leu Lys Ser Pro Glu Ile Lys Asn Pro Ala Pro Thr Gly Thr Ser 20 25 30

Asn Leu Ser Cys Phe Leu Ser Xaa Phe Trp Leu Met Gln Gly Thr Asn

35 40 45

Ser Leu Pro Arg Glu Asn Tyr Leu Asn 50 55

<210> 562

<211> 59

<212> PRT

<213> Homo sapiens

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<222> (1)...(59)

<223> Xaa = Any amino acid

<400> 562

Asp Leu Tyr Pro Xaa Arg Ser Gln His Cys Ser Phe Asp Pro Ser Val 5 10 15

Ala Pro Met His Gly Ile Lys Asn Ser Ile Thr Ser Leu Ile Phe Leu 20 25 30

Ile Ser Tyr Leu Xaa Leu Glu Met Ser Ser Leu Ser Glu Ser Leu Val 35 40 45

Leu Ser Ser Gly Asp Tyr Val Leu Asp Thr Pro 50 55

<210> 563

<211> 79

<212> PRT

<213> Homo sapiens

<400> 563

Cys Phe Leu Phe Pro Tyr Leu Trp Leu Tyr Ala Gln Pro Leu Phe Pro 5 10 15

Lys Gln Gln Pro Pro Ala Leu Ala Pro Gly His Pro Asp Phe Ile His 20 25 30

Thr Gln Asn Glu Gln Ile Asp Pro Ser Pro His Ile Gln Asn Leu Met 35 40 45

Trp Asn Pro His Leu Ser Gln Glu Leu Ala Glu Thr Phe Met Val Arg
50 55 60

Asp Pro Leu Arg Pro Leu Leu Val Phe Ser Leu Ala Asp Ile Arg 65 70 75

<210> 564

<211> 64

<212> PRT

<213> Homo sapiens

<400> 564

Ala Cys Ser Lys Gly Ser Glu Glu Phe Gln Arg Val Arg Gly Val Ala
5 10 15

Glu Arg Asp Gln Cys Leu Phe Leu Leu Cys Tyr Gln Ile Tyr Thr 20 25 30

Val Arg His Leu Tyr Ile Leu Tyr Arg Thr Leu Gly Ser Arg Lys Ser 35 40 45

His Met Asn Leu Pro Leu Ser Ser Gly Ser Gln Leu Trp Leu Ala Pro 50 55 60

<210> 565

<211> 57

<212> PRT

<213> Homo sapiens

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<221> VARIANT

<222> (1)...(57)

<223> Xaa = Any amino acid

<400> 565

Leu Tyr Tyr Cys Ser Tyr Leu Cys His Phe Arg Thr Ala Leu Ile Leu 5 10 15

Ala Val Cys Cys Gly Ser Ala Ser Ile Val Ser Leu Leu Glu Gln
20 25 30

Asn Ile Asp Val Ser Ser Gln Asp Leu Ser Gly Gln Thr Ala Arg Glu 35 40 45

Tyr Ala Val Ser Ser Xaa His Asn Val

<210> 566

<211> 55

<212> PRT

<213> Homo sapiens

<400> 566

Ile Leu Leu Glu Phe Phe Arg Asn Gln Arg Gly Ser Leu Asn Pro Arg
5 10 15

Lys Thr Val Pro Phe Ile Lys Ser Glu Gly Glu Lys Lys Gly His

Cys Asn His Ser Val Val Ser Ile Asp Ser Ala Ala Ala Leu Leu Pro

35 40 45

Leu Lys Leu Val Leu Leu Pro 50 55

<210> 567

<211> 51

<212> PRT

<213> Homo sapiens

<400> 567

Tyr Ser Asp Phe Asp Val Phe Cys Ser His Thr Tyr Gly Tyr Met Leu
5 10 15

Ser His Cys Ser Gln Ser Ser Ser Pro Leu Leu Trp Pro Leu Gly Ile 20 25 30

Leu Thr Leu Ser Thr His Lys Met Ser Lys Leu Thr Leu Pro Pro Ile 35 40 45

Phe Arg Thr 50

<210> 568

<211> 75

<212> PRT

<213> Homo sapiens

<400> 568

Lys Val Gly Glu Tyr Ile Leu Gln Ser Leu Leu Arg Ile Arg Lys Ile  $\phantom{-}5\phantom{+}10\phantom{+}15\phantom{+}$ 

Tyr Val Ala Phe Asn Ser Val Pro Ser Thr Cys Leu Leu Ala Ser Leu 20 25 30

Thr Glu Thr Pro Val Thr Thr Ile Leu Thr Ile Ile Ile Asn Leu Thr 35 40 45

Cys Phe Gln His Ala Glu Ser Ser Tyr Leu Phe Tyr Pro Leu Ala Asp 50 55 60

Phe Leu Leu Gln His Ile Ser Leu Gly Lys Leu 65 70 75

<210> 569

<211> 4809

<212> DNA

<213> Homo sapiens

<400> 569

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Lys Cys Trp Gly Tyr Arg His Lys Pro Pro His Pro Ala Cys His Ile 115 120 125

Leu Leu Asn Tyr 130

<210> 574

<211> 62

<212> PRT

<213> Homo sapiens

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Met Thr His Ser Ser Ala Trp Leu Glu Arg Pro Gln Glu Thr Tyr Asn
5 10 15

His Gly Gly Arg Arg Gly Ser Lys Ala Arg Leu Thr Trp Trp Gln 20 25 30

Glu Arg Thr Ser Glu Gly Gly Asp Cys His Lys Leu Phe Phe Glu 35 40 45

Thr Arg Val Trp Pro Cys Cys Pro Gly Trp Ser Ala Val Ala 50 55 60

<210> 575

<211> 76

<212> PRT

<213> Homo sapiens

<400> 575

Met Val Lys Ser Arg Phe Thr Lys Asn Thr Lys Ile Thr Gln Ala Trp
5 10 15

Trp Arg Ala Pro Val Ile Pro Gly Thr Arg Glu Ala Glu Gly Gly Glu 20 25 30

Ser Leu Glu Pro Gly Arg Leu Arg Glu Glu Asn Arg Leu Asn Pro Gly 35 40 45

Gly Arg Gly Cys Ser Glu Pro Arg Ser Cys Cys Cys Thr Pro Ala Trp 50 55 60

Ser Thr Glu Gln Asp Ser Ala Ser Lys Thr Asn Lys 65 70 75

<210> 576

<211> 68

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<213> Homo sapiens

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<223> Xaa = Any Amino Acid

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Thr Val Cys Tyr Leu Ala Ser Ser Ser Ala Ser Arg Glu Thr Ala Thr 20 25 30

Arg Gln Ala Pro Gly Asn Trp Lys Met Xaa Ser Lys Cys His Ala Gln 35 40 45

Leu Leu Phe Thr Phe Tyr Leu Asn His Phe Tyr Gln Ile Arg Leu Asn 50 55 60

Pro Gly Tyr Ser 65

<210> 577

<211> 57

<212> PRT

<213> Homo sapiens

<400> 577

Met Tyr Leu Glu Asn Ser Phe Tyr Cys Gln Met Ile Leu Leu Lys Arg
5 10 15

Cys Arg Leu Ser Lys Ile Ser Thr Gln Arg Val Val Pro Asp Gly Pro 20 25 30

Pro Ala Pro Val Pro Gly Ser Phe Pro Met Phe Pro Arg Phe Gly Phe 35 40 45

Arg Leu Ala Pro Pro Ala Asp Thr Pro 50 55

<210> 578

<211> 51

<212> PRT

<213> Homo sapiens

<400> 578

Met Gln Leu Ile Tyr Leu Cys Phe Leu Gly Leu Leu Tyr Ile Arg His
5 10 15

His Asp Ser Gln Ser Phe Val Ile Leu Tyr Tyr Lys Lys Leu Asn Tyr 20 25 30

Tyr Phe Lys Tyr Gly Gln Ile Arg Ala Phe His Ile Ala Lys Val Tyr 35 40 45

Gln Pro His 50

<210> 579

<211> 56

<212> PRT

<213> Homo sapiens

<400> 579

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Leu Tyr Ile Arg His His Asp Ser Gln Ser Phe Val Ile Leu Tyr Tyr 20 25 30

Lys Lys Leu Asn Tyr Tyr Phe Lys Tyr Gly Gln Ile Arg Ala Phe His  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Ile Ala Lys Val Tyr Gln Pro His 50 55

<210> 580

<211> 67

<212> PRT

<213> Homo sapiens

<400> 580

Met Glu Leu Arg Thr Lys Ala Leu Arg Thr Ala Gln Gln Leu Thr Ser 5 10 15

Cys Val Thr Ala Leu Lys Ala Ala Gly Pro Pro Leu Thr Phe Trp Lys 20 25 30

Gly Lys Trp Val Gln Cys Cys Leu Pro Leu Trp Gly Leu Leu Gly Ser 35 40 45

His Ala Phe Tyr Ile Tyr Ala Val Asp Ile Phe Met Phe Pro Gly Ser 50 55 60

Phe Ile His

<210> 581

<211> 77

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<213> Homo sapiens

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Thr Ala Gly Gln Thr His Gly Thr Gln Asp Lys Gly Ser Lys Asp Ser 20 25 30

Thr Ala Ala Asp Ile Leu Cys Asp Ser Leu Glu Ser Ser Arg Pro Ala 35 40 45

Ala His Ile Leu Glu Gly Lys Met Gly Thr Met Leu Ser Ala Thr Leu 50 55 60

Gly Pro Ser Trp Val Thr Cys Ile Leu His Leu Cys Ser
65 70 75

<210> 582

<211> 51

<212> PRT

<213> Homo sapiens

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5 10 15

Asn Arg Asn Trp Ser Lys Val Trp His Thr His Ser His Val Asp Val 20 25 30

Lys Leu Cys Leu Glu Phe Leu Cys Gly Val Trp Phe Gly Leu Gly Phe 35 40 45

Leu Gly Val

<210> 583

<211> 60

<212> PRT

<213> Homo sapiens

<400> 583

Met Ser Thr Ser Asp Gly Phe Ala Pro Pro Pro Gln Leu Gly Ser Arg
5 10 15

Cys Ser His Ile Arg Gly Pro Ile Lys Ile Ala Arg Asn Lys Phe Pro 20 25 30

Arg Thr Leu Thr Ser Gln Glu Leu Arg Arg Phe Ala Glu Tyr Ser Gly 35 40 45

Met Met Phe Gly Asp Gln Thr Thr Ala Gly Gln Lys 50 55 60

<210> 584

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<213> Homo sapiens

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5 10 15

Met Ser Thr Ser Asp Gly Phe Ala Pro Pro Pro Gln Leu Gly Ser Arg
20 25 30

Cys Ser His Ile Arg Gly Pro Ile Lys Ile Ala Arg Asn Lys Phe Pro 35 40 45

Arg Thr Leu Thr Ser Gln Glu Leu Arg Arg Phe Ala Glu Tyr Ser Gly 50 55 60

Met Met Phe Gly Asp Gln Thr Thr Ala Gly Gln Lys 65 70 75

<210> 585

<211> 50

<212> PRT

<213> Homo sapiens

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Met Val Tyr Arg Phe Gly Gln Met Ser Asp Asn Pro Phe Tyr Ile Leu 5 10 15

Ala Ser Leu Gly Ser Ser Ser Cys Arg Asn Gly Leu Ala Ser Lys Trp 20 25 30

Arg Gln Ala Asp Pro Ser Asp Gly Tyr Met Glu Pro Cys Phe Gln Leu 35 40 45

Leu Phe

50

<210> 586

<211> 60

<212> PRT

<213> Homo sapiens

<400> 586

Met Leu Val His Ile Tyr Ser Cys Cys Gly Met Val Tyr Arg Phe Gly
10 15

Gln Met Ser Asp Asn Pro Phe Tyr Ile Leu Ala Ser Leu Gly Ser Ser 20 25 30

Ser Cys Arg Asn Gly Leu Ala Ser Lys Trp Arg Gln Ala Asp Pro Ser

50

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Met Glu Ser Met Lys Ala Leu Glu Lys Leu Val Lys Arg Arg His Pro 50 55 60

Pro Val Ile Phe Ala Ser Leu Val Gln Asn Val Thr Lys Met Pro Arg 65 70 75 80

Met Ser Gly Val Cys Val Ile Leu Thr Val Leu Lys Pro Thr Ser Ile 85 90 95

Pro Ser Ala Leu Leu Met Gly Asn Leu Met Ile Met His Ala Lys Ser 100 105 110 .

Lys Lys His Arg Val Arg Asn Arg Arg Lys Leu Lys Ser Cys Leu Trp
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nnagcaaggc tacataaaag tgccatt	nggganttgg ncgtccagaa	ggactcgaaa gagggacggt	tggtacagtt tacaggcngg	gggctgggga ganctccaaa	tegecettgt ggteagtece	480 540 547
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Cys Ser Gly Val Leu Val His Pro Gln Trp Val Leu Ser Ala Ala His	
35 40 45  Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu Gly Leu His Ser Leu Glu	
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Arg His Pro Glu Tyr Asn Arg Pro Leu Leu Ala Asn Asp Leu Met Leu 85 90 95	
Ile Lys Leu Asp Glu Ser Val Ser Glu Ser Asp Thr Ile Arg Ser Ile	
100 105 110	

Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly Asn Ser Cys Leu Val Ser 120 Gly Trp Gly Leu Leu Ala Asn Gly Arg Met Pro Thr Val Leu Gln Cys 135 140 Val Asn Val Ser Val Val Ser Glu Glu Val Cys Ser Lys Leu Tyr Asp 155 150 Pro Leu Tyr His Pro Ser Met Phe Cys Ala Gly Gly Gln Asp Gln 170 165 Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly Pro Leu Ile Cys Asn Gly 185 180 Tyr Leu Gln Gly Leu Val Ser Phe Gly Lys Ala Pro Cys Gly Gln Val 200 205 Gly Val Pro Gly Val Tyr Thr Asn Leu Cys Lys Phe Thr Glu Trp Ile 220 215 Glu Lys Thr Val Gln Ala Ser Ile Val Gly Gly Trp Glu Cys Glu Lys 235 230 His Ser Gln Pro Trp Gln Val Leu Val Ala Ser Arg Gly Arg Ala Val 250 245 Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala His 265 Cys Ile Arg Asn Lys Ser Val Ile Leu Leu Gly Arg His Ser Leu Phe 280 285 275 His Pro Glu Asp Thr Gly Gln Val Phe Gln Val Ser His Ser Phe Pro 300 295 His Pro Leu Tyr Asp Met Ser Leu Leu Lys Asn Arg Phe Leu Arg Pro 315 310 Gly Asp Asp Ser Ser His Asp Leu Met Leu Leu Arg Leu Ser Glu Pro 330 325 Ala Glu Leu Thr Asp Ala Val Lys Val Met Asp Leu Pro Thr Gln Glu 345 340 Pro Ala Leu Gly Thr Thr Cys Tyr Ala Ser Gly Trp Gly Ser Ile Glu 365 360 Pro Glu Glu Phe Leu Thr Pro Lys Lys Leu Gln Cys Val Asp Leu His 380 375 Val Ile Ser Asn Asp Val Cys Ala Gln Val His Pro Gln Lys Val Thr 390 395 Lys Phe Met Leu Cys Ala Gly Arg Trp Thr Gly Gly Lys Ser Trp Gly 410 405 Ser Glu Pro Cys Ala Leu Pro Glu Arg Pro Ser Leu Tyr Thr Lys Val 425 Val His Tyr Arg Lys Trp Ile Lys Asp Thr Ile Val Ala Asn Pro Glu 440 Phe

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<210> 618
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<sup>&</sup>lt;211> 385 <212> DNA

<sup>&</sup>lt;213> Homo sapien

<sup>&</sup>lt;220>

<sup>&</sup>lt;221> misc feature

<sup>&</sup>lt;222> (1)...(385)

<sup>&</sup>lt;223> n = A, T, C or G

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<210> 619 <211> 869 <212> DNA <213> Homo sapien					
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<211> 267
<212> DNA
<213> Homo sapien
<220>
<221> misc_feature
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<223> n = A, T, C or G
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                                                                       120
                                                                       180
ccccaggagg ccatcagtag cgagctactg cctcggccac aacctcccag caggatngcc
                                                                       240
cgcggtttcc aatctgcgaa aggaggaccg ccnagccaga aatgccnagc cnagcgatca
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                                                                        120
acagatgtga aggatattcc ctttaatttg acaaataaca tacctggttg tgaggaagaa
                                                                        180
gatgcatctg aaatatctgt ctcagtggta ttcgagacat ttcctgaaca aaaagaaccc
                                                                        240
agtctcaaaa atatcatcca tccatactat catccgtact ctgggtccca ggaacatgtt
                                                                        300
tgccagtcat cttctaagct tcatttacat gaaaataaat tagactgcga caatgataac
                                                                        360
aaactaggca ttggacatat ttttagtaca gataacaact ttcataatga tgcaagcact
                                                                        420
aagaaagcaa ggaacccaga agtggttacg gttgaaatga aagaagacca agagtttgat
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                                                                        540
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                                                                        600
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acacattaga aanaagantt ctgggctttg aagaaagaaa atgttccact tcataaagaa
                                                                        720
                                                                        780
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                                                                        840
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                                                                        847
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<211> 681
<212> DNA
<213> Homo sapien
<220>
<221> misc feature
<222> (1)...(681)
<223> n = A, T, C or G
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<210> 624 <211> 661 <212> DNA <213> Homo sapien					
<220> <221> misc_feature <222> (1)(661) <223> n = A,T,C or G					
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<210> 625 <211> 181 <212> DNA <213> Homo sapien					
<400> 625 gcaacaatca gatcatgtta tgtccaagga gagcagggtt aatacaaaat tcaaccggtc c	ctcctgtgaa	aaaaaggtgg	ggaaatgttt	gagagtaaaa	60 120 180 181
<210> 626 <211> 181 <212> DNA <213> Homo sapien					

<400> 626 gcaacaatca gatcatgtta tgtccaagga gagcagggtt aatacaaaat tcaaccggtc c	ctcctgtgaa	aaaaaggtgg	ggaaatgttt	gagagtaaaa	60 120 180 181
<210> 627 <211> 813 <212> DNA <213> Homo sapien					
<220> <221> misc_feature <222> (1)(813) <223> n = A,T,C or G					
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<223> n = A,T,C or G  <400> 628 tttgggnggn ggtgtctcnt atcccgtaat aacggaagac agactacctt agaggaataa aagaaaccca cacgtcgttc gcgatctcga tatcgagctc tggaagatct cgacgacgat aggattctgc ggagggaccc agcccggctc tttctccgaa gctggcggta gactcgaagt gtaggaacac gaagagtagt	gaagaagagt aggaaaaaag tgaacctgga aagaggtagg aagaagttaa atcgacgtag tggtcggagc gttcgggcga	cagaagagtg cagaggagga gccttatcaa tttagagact agtgtagagg agacttgaag gtacagtatg atcgacttat	cttctataag agagtggtag aaaggtctag tctcgtcctc gtgcttgagg gcctactaag cgacgtcgat aatagtcgcg	gatcgggacg aaggagtcag ataaacgata gagagcgaaa agcgcgtgga gtccacaaga cggcagacaa cgctagtaac	60 120 180 240 300 360 420 480 540

ggagaggctt aataactaag acacttggag cctaggccaa cgcgaa	646
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12137 Homo Sapten	
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tetteceett teggetteee etttetgteg gtaceeetee etagtegtet eetacaeett egtacegteg atatatagte geegeggaet ageetatta ggtgteetag actegttatt	180 240
gatocactca ttagtotagt actatgogto acgtatotta gttgcotaag agggagatta	
aatcctccac aagttccgac gaattcctgg actctcgtac tagcaaactt tcttatgagg	360
ctteettgta tatettetgg atgttteteg tgteeeggte eteegetact actagagete	420 480
cttgccctat ctctagaagt agaggactet cgggttcgtt ctccaaatet agcgctagag ctatcgctac ccgctcgatt cccccagcgg aatettgaaa cctgaggtag tacacaaacc	
ctccncatct tccctcggtt gctccttctt ctcatccccc cttcccgcct tctcgggaan	600
gaatctactt tancttc	617
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<211> 644	
<212> DNA	
<213> Homo sapien	
<220>	
<221> misc_feature <222> (1)(644)	
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ccaaacactt tccqccccct acctaggaga cattagaagg gtttaggctt cggcgtatag	120
taaagtooto tacotoggaa gtagagaatt oggtatttaa attoagggtt agaggotogo togttagatt tatagtttag gtttagaato ggaaacotto gatottoott agaagggtaa	180 240
taagtgaggc cctaaatccg tctaaccaag gcgttaaggt ccgtacctaa acctagtctt	
atcttctatc aggcgcacca atataggtag gttctacttt cgtataggcc ttaaggaata	360
gttcggtagt tatcgaaggc actcctctct aggctaggct	420
gggaccgtcg tcgcanaaat atcgatggac ggtaggtatc tccgcgttac gcgtcgggctagggatatag agcgaattat cggcgagagg cggtcgctan gaatcggtat caatatgntg	
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<211> 526	
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<213> Homo sapien	
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                                                                        120
atccencgta tegngtaggt eggtaceggt aceggngate nenaegattn ttegggtegt
                                                                       180
cncccttaan acggncccgt agccnccgga anaaatacta cgagngactc taatntagca
                                                                       240
anaccegeeg tenattanta geateettag tetteeaatg negnggattn ngaateettn
                                                                       300
naagttatcg ggtagaacgg gtcccggtcc cccgccctct ttncaattaa cgccgggtac
                                                                        360
aaantcggtt tctaaattcc ncacgaattt ngncggcaac attcncgggn ccttattanc
                                                                       420
cntttccaac cccgatacnc nagctcgatc gggctttanc gaatccgggg tencccccga
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<213> Homo sapien
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cgtctttatc ttacgaggca ccctgatatt gttgcgcttt ggtttggttg tggagagttt
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tgtcctactc tagcgggtca tgcggatgat atgtagcctg cgtggcctga tagtgatgtt
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                                                                       300
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gattgggaga tatagaatca taagtgttag gtataggtcg attgagcgag ttcgtggaat
                                                                       360
tegtgtggte atcataatta gagtgaggat gggetetata tttettagag gacgeaeggt
                                                                       420
cgtgattcgg ggtttgatgg gtgttcttct tgtgggcacg attagcttgt tcatgatggt
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aaggaccata ctgtttcgaa tgaggattcg tgtcttcgga ttgttgtgga tattgtggnc
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tanactattt agtgtaagcc ggaggtggtt tgccgtggtg gagtatccga nnttcattcg
                                                                       600
ganggtatgc gtgcggagcg gtccttgtag acattccgga aaaatgg
                                                                       647
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<211> 630
<212> DNA
<213> Homo sapien
<220>
<221> misc feature
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<223> n = A, T, C or G
<400> 633
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                                                                       120
tacagtaaac acccgagaat ataaacccac acctaggcct ccaatcctac cagggaagca
                                                                       180
agaagccgta gtctagcgta ttacgaaccc gagatagaga cggagatact tagttttatt
                                                                       240
ctctcggaat aggaaagacg actggggagg gaatataggc tagcgcgggg ataggggcta
                                                                       300
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atataccta gcgcgaaga gagagatct tttcgatct	t gggggcgggt g atgttcccgt a acttcgtact a ctagatttcg c ctctctatac a tatgacgttc	agaaagagac ctagctttat gtatcgccgt tacatggnga	gttagaggtc ataggtagtc cgtatgtatt	tccgaagcta gctctagtcc cgaaatagtc	taaaggagag cataagcgac ttcttcccct	360 420 480 540 600 630
<210> 634 <211> 647 <212> DNA <213> Hom						
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caaccctat taaagagaa gctagttga ttagtatgc ggaaagcta ttactaccc aagttatag tctcgggtt tccgcctt ccttataaa <210> 635 <211> 645 <212> DNA <213> Hom	t gggtttttt a gtttactcgt a gtactttcct t tttatccggc t cgggagtta t tcgttatta t agtcgggta c tcaacaacg c tcagccggta a gcttccaagg c cncctacagg	ataggggaat ttatatgtta gttatagggc acgaggtcac tcgcgattct gcggtcggtc tattagtcga atccctctat ttcctcggaa	cgaggagaaa agagcttagc ttagttctgg gggatagcgc cgaggtcgaa aaaactagtg aattatagcg ttgggggtct gcgaggggtt	taggaacgaa gtaatgactt ttatctcggg gtaccctttc aggatcaagg tagtaccttt gatagatcga tctccctctt ctacttaagt	gagcgggtga tcgttatatg tctaattccc taaggttctt atcttccctt acctcctcga gacggttctt cccctttgtc	60 120 180 240 300 360 420 480 540 600 647
<223> n =  <400> 635 ccttcggct agataccca ataaaagac gtcccactc	A,T,C or G	cactcaactt agctacacag ccggtatcgt	cgtctaagta cctacgggaa cgttttccca	aaactctaga tctcacgaat taccaatgtc	acttccaaac cccgattcaa gaaaaataaa	60 120 180 240 300
gttcgaggo tcgggggca tctcccgca gcccgcggo aaattctct	c gggggcttc a cggttaaagc t agagactctc t acatatcttg t agaggatagt a ccttgacagc	aaaatacaaa acgcctctaa gcgtatatca cggattagct cggggtcgta	acaactactt agtactactc actcgcatcg ccgagggact gttaggcagt	aaagtttacc gtttcgagaa cttctagcat atagggttaa acgaggggac	ccttctaaag ggggtagtca tccgacggtc ttagtctagt	360 420 480 540 600 645

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<212> DNA
<213> Homo sapien
<220>
<221> misc_feature
<222> (1)...(643)
<223> n = A, T, C or G
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                                                                         60
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                                                                        120
                                                                        180
cctggctccc tcctagnggc tttacgaacg tccctcctct tcttacggct cggaagtggt
tacggttaaa tccggaggng gggctaacga atccaaggct aactcctctt anagtttgtt
                                                                        240
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gtccncncgt ttagtaagga tccgtggagg gcgagtattt gncccccggc ctttattnta
tagttcccta gtacgataaa gntaccggct atcctattac agcggataaa agttatttan
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                                                                        420
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gttgnttccg acaaggnagt ttcggttaac tccacaaact cctccgccga ctctanggtg
                                                                        480
                                                                        540
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cnttttaaca taggttattc cgtttaggtt cttgcgggcc cgtgggggta gtncnccggc
                                                                        643
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<211> 631
<212> DNA
<213> Homo sapien
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<221> misc_feature
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cgctgggaag actagaagtt agctacggac gattagtgtg attccactct taataacgag
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taatcgttta cgtcgggttg gtgtttcggg gttttggaga gtaagcgtag ttgtggagtt
                                                                        180
togoatatag gtocoottac ttoggogato togtottotg toggttaggt tattattgtt
                                                                        240
catccttcgc attagtagta gggttggtcg gataaatcga tagctattct ttagaattcg
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tagtcggaga attcgtgtac gaagtccttt aagttcttta agttcgcgag taagacgtgt
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acggttattt tgtcgtcgac gtaggtgtcg tttacgggag tttcgtttta ggggtttacg
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                                                                        480
                                                                        540
gtcgattttt cgaaggcgca tttgttatcg aaggggagtc cttggagaat cgagatattc
caagaatatt acggagatta cagatcggaa ggctcccgag atcggacgta ttaccggtct
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                                                                        631
cgcccgaaac gagtaggtat cntccggata a
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<212> DNA
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<220>
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<222> (1)...(606)
<223> n = A, T, C or G
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gtaaacgatt ctctcagata	ttagaaacta acctccggtt cgcctcgcga cgcggtaaaa	ctagcccttt gacgtcgcga	ttactcgcat ttcaacttta	aacgggagaa	cggggtccgg	480 540 600 637
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ggtccgcccg gaattaaaag cgggatcccc aaaacgnngn ttcgcaagaa gagaagaatc
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atagcgatag anctttcata gtacaaaggt aactaagagg aaaataatgc agattcagaa
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ctagttgcca aattagaact cgattaggcc aaggatccga gcctggcgct atcacttcgg
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gacttaagct acggtagagc agtcggtcct gaagcatagc tcccgtagga cgtaggaaac
                                                                        360
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ctcccctatt tttccaacac atataccggc aaaggaaaat cttntgtcct cggtctaaag
                                                                        480
                                                                        540
agagggaaaa aaaacgatat ctaggttcgg gtttatccat ttaaaaaanat ngacgcgact
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ttagggcggg aaggggttag agcggagaga cgtcgtcgtg gaagcttctg gcggagcgcg
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                                                                        300
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taagctagag gtcgaggtcc tcgtttaggc tccgggctct tcgggcagta tcctctttct
                                                                        420
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cgaggaacgg agcgaccgac gtcgtagccg gacccgtcta tccgtacgtt tagagatacg
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ctcacctcca cgggcgtata tgcccgtata cgtataaacg cgtaatatac tcgcgcgtaa
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aacacgtata cactatatac acgcatcgta cggaccgtat agcgttatac gcgcgcgtat
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attaatttac acttatatac gcgttaacac gatatatcac acnccg
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<211> 654
<212> DNA
<213> Homo sapien
<220>
<221> misc_feature
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<400> 645
                                                                         60
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ggttggnata cgttntangg <210> 646 <211> 645 <212> DNA <213> Homo sapien	gangcctgng	tccgntattc	cttgttttgg	cctn	654
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gtgagtgaag tttaaatgtt	tagtcaggtt attacatgtc ttaaggctag ttgnggaagn	ttangaaaat gggatgatgc	tatactggga aatgganaan	atatctctga	cattaatggg	600 660 720 753
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gacaagatga ctggctctgc	tatatcatat gtgctgaaga tgactgtggg ccganantca	tgatataact gacataccga	cctacctctt aaaggaatgt	atgtaggcta gggttaatat	gaggtaaagt cagangacct	120 180 240 300 306
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	A, T, C or G					
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                                                                        420
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gctgcaattc acagactaat cntctagacc cacctcagta ccagatggta ccacacagct
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                                                                        120
                                                                        180
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                                                                        202
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ccattcatgg aggcctgggn anttctgtga ntgacntnga cnctanacnc tnccactgtn
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<210> 660 <211> 849 <212> DNA <213> Homo sapien	
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ncctgggcgt anaaactgn gaattcaccc ctcattgnn	a gggnccccaa a acctttccct	tccctggtgg nttnncaccc	ggtactgctt ctaaac	tgcactggng	600 646
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tcaactctat ccaattttg	t cagccataaa	acttaccttt	ttcacatact	tctaactcta	240
acaatgtgag aaatgtaga	t cattgcaatt	atacccacaa	ggcagatggc	tacatgcaga	300
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aagccagtga tgaaggaca					480
gtggagcaga aactggagg	a gggcnaancc	atcngtaaaa	aaaattttgn	tnctatttgg	540
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atcgcaaata gccccactg ggtggcctaa tgtaatttt	c ttttacaaat t gacateteta	cattttttct	tagaaccaga	aatgggtgcc	240 300
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anaattattt taggactct					480 540
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                                                                       300
tggctttctc ttcatagaaa tagaaaaaaa aattgtataa aaccacaaaa ggtcctgaat
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                                                                       420
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agaccaatgg ancagaataa agaaccccac aaataaatcc atatatntac cgccanctga
                                                                       480
                                                                       540
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                                                                        660
acgcaaannt caacttegga atgggattae aaaacttaag acattecaae ccaagaaact
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atnaaancta ctattaagaa aacagatcnc nccc
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                                                                        180
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gcaatcgcaa atagccccac tgcttttaca aatcattttt tctcttctag gtatagcctg
                                                                        240
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                                                                        660
tattgggcnt aaaatagacc naagaccaat ggaacagaat aaagaaccca aaataaatcc
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tacgtgttta cgttatttta tttcctanaa caaggcngaa ttgggactcg aatggttcag
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                                                                       240
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caggttttca ncctaatagg tgatatntaa gaaaaaaaaa acaatcgcan atagcccact
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ctncn tcacg	ntctgt gnatct	ctngtccnat actgccggca gttngttncc aanaaatac	naattaagca	ccatntgtca	caaaaagtat	tgcgttacct	300 360 420 439
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Leu Ser His Ser Val Ala Val Val Thr Ala Ser Ala Ala Leu Thr Gly 50 55 60

Phe Thr Phe Ser Ala Leu Gln Ile Leu Pro Tyr Thr Leu Ala Ser Leu 65 70 75 80

Tyr His Arg Glu Lys Gln Val Leu Ile Gly Gln Trp Val Glu Ser Gly
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Glu Glu Lys Phe Met Thr Met Val Leu Gly Glu Ser Leu His Pro Pro 50 55 60

Ser Phe Leu Phe Gln Ile His Ala Thr Trp His Val Gly Gln Glu Tyr
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Leu Cys Pro Gly Ser Cys Leu Glu Gly Glu Val Val Cys Trp Glu Gly 85 90 95

Ile Ala Gly Gln Glu Gly Asp Pro Gly Leu Arg Gly His Thr Lys Arg 100 105 110

Lys Lys Arg Ile Pro Arg Thr Tyr Pro Ser His Leu Trp Ile Pro Gly
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Ser Asp His Trp Arg Gly Arg Tyr Gly Arg Arg Arg Pro Phe Ile Trp 50 55 60

Ala Leu Ser Leu Gly Ile Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala 65 70 75 80

Gly Trp Leu Ala Gly Leu Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu

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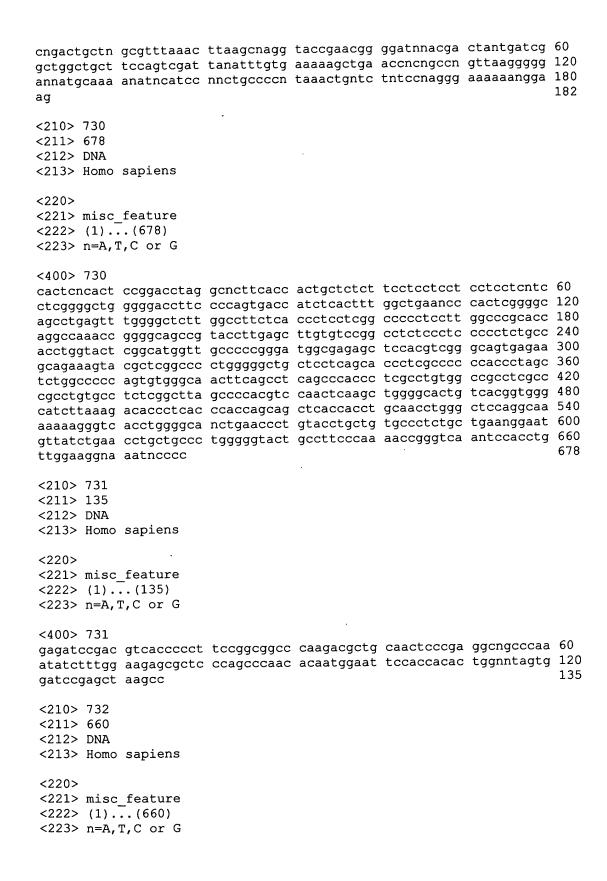
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<211> 120
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(120)
<223> n=A,T,C or G
<400> 727
gtgtgggtgg ggaattccat tgtggttggg ggnaaatctc cgcttgtcca aagnacaggg 60
ggggtcnctt anagngnagg gggttcctcc ccaccacttg ncttgnccat tgngagnaag 120
<210> 728
<211> 130
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(130)
<223> n=A,T,C or G
<400> 728
gacccactgc agcgttnaac ttagcttgga ccgagctcgg atccctagtc cgtgtggtgg 60
aattccatgt gtcgagagag gggcaaatac nctccaanac ancnccctca tgctcnacac 120
                                                                    130
atattcgcat
<210> 729
<211> 182
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(182)
<223> n=A,T,C or G
<400> 729
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<400> 732
gcttggtacc gagctnggat ccctagtaac ggccgccagt gtgctggaat tcggctttct 60
tcaatcagnt nacgagetge atggtetget aacattgtea taattgetgg catagattae 120
tgaaaataaa gaaaaaaat tgaagctgcc tatcaagttt tggtattatc aaaaacttcc 180
tacaagttat tttacttcaa ccatgttatt acaaatattt taatgaatac tttagagact 240
ttaattacaa aaaactgaga tagtaaaagc aagtaataaa agctgaaatt acttagctat 300
ttgataatta cataaattat tatggtccat tcaacttttc tagtgtttag tttatacacc 360
aggaagactt tectatteta etaacattta taaagtatge taacetatta tttaaaegea 420
tccactatta ggattttatg gcctaaaacg tgatacagtt cagtatcttg atgtcaaaac 480
tttttaagca agtagggatt aagttcaagt gaatgtgatt ttctttcttc ccagtagggt 540
cttctgaata actcagnaaa gctcacttcc attatcttac tttataaaaa aatgctataa 600
gacagaatgg gccgacgtgg nggctccacc tgtatccacc tttggaggcg agnggcgaat 660
<210> 733
<211> 836
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(836)
<223> n=A, T, C or G
<400> 733
aattaatgac tttttttccg ccctgccaag ctagtttgtc taaatataat gtaaagaaat 60
tagctactca ttttctggtc cacgaaggtt cctaaaatgg gaagaagtgg agatctgacc 120
ttgttagttc taaatacact aaactgggag tgccatggat ggctttcagg atgtcctgaa 180
tcctctataa ttgtatacaa aatcgtgagt ttttaaaaac tgggttagag ctattggttc 240
ctcagagtct caggcatctt agacccccaa aaaggttaag gactactgac ttaaccaatt 300
aggtttgagt ggcattggct ttgaagaaaa gcagaggaaa gatatatttt ataattctgg 360
gcaacaaaaa agtggatgtg tgccagcatc ttagagtaga atcctcttaa aaggatagca 420
ctgcatatga actagtaggt tttaaccagt gcatatttag gcgaagtagc tcattttct 480
gttagaattc ttttttattt gggaatgggc aagcttttac agcttttacc ttgccaatga 540
atacctggaa tttaaaaaat cttgttaggc atattgccca taaagttttt tttcctagat 600
catatattca gtaaatatgt ttgtagcttt atttcaatcc cccaattcat tgagggttga 660
aacaatttga atggtttgag tgtagaagct aagttatttc tgtagaggct aagggcattt 720
ataccaanat atgttagact tgnggntcct gttaaccatg ctgtanacaa taggaattac 780
tgtatatcca cattttaatt ttaacatctt ctgctttgnt gntggtttga gangga
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<210> 734
<211> 694
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(694)
<223> n=A, T, C or G
<400> 734
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ctataattgt atacaaaatc gtgagttttt aaaaactggg ttagagctat tggttcctca 120
gagtctcagg catcttagac ccccaaaaag gttaaggact actgacttaa ccaattaggt 180
ttgagtggca ttggctttga agaaaagcag aggaaagata tattttataa ttctgggcaa 240
```

```
caaaaaagtg gatgtgtgcc agcatcttag agtagaatcc tcttaaaaagg atagcactgc 300
atatgaacta gtaggtttta accagtgcat atttaggcga agtagctcat ttttctgtta 360
gaattetttt ttatttggga atgggcaage ttttacaget tttacettge caatgaatae 420
ctggaattta aaaaatcttg ttaggcatat tgcccataaa gttttttttc ctagatcata 480
tattcagtaa atatgtttgt agctttattt caatccccca attcattgag ggttgaaaca 540
atttgaatgg tttgagtgta gaagctaagt tatttctgta gaggctaagg gcatttatac 600
caagatatgt tagacttgtg gttcctgtta accattgctg tagacaatag gaattactgt 660
atatccacat tttaattttt aacatcattc tgtc
                                                                694
<210> 735
<211> 126
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(126)
<223> n=A,T,C or G
<400> 735
ncnttgaaac nggttgacca gacttcaggc ctgtgcgctc aatcgtggag aatctcgtgc 60
cgaattcggc acgagtctct ctctctct ctctctct ctctctct ntctctctt 120
                                                                126
ctctct
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<211> 165
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(165)
<223> n=A,T,C or G
<400> 736
cagaagcett taaaceggtt ngaceagaet teaggeetgt gegeteaate gtggagaate 60
tegtgeegaa tteggeaega gtetetetet etetetetet etetetetet etetetetet 120
                                                                165
<210> 737
<211> 125
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(125)
<223> n=A,T,C or G
<400> 737
ggnagcccct ttaaccgttt gtccagactt caggcctgtg cgctcaatcg tggagaatct 60
cgtgccgaat tcggcacgag tctctctct tctctctc tctctctc tctctctc 120
tctct
```

```
<210> 738
<211> 137
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(137)
<223> n=A,T,C or G
<400> 738
ggagnenett gancaggatg accgaettea ggeetgtgeg eteaategtg gagaateteg 60
137
tctctctc tctctct
<210> 739
<211> 970
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(970)
<223> n=A, T, C or G
<400> 739
aggcctattt aggtgacact atagaacaag tttgtacaaa aaagcaggct ggtaccggtc 60
cggaattcgc ggccgcgtcg acggcccttn gtgccactag ntctttcatt cttccccccc. 120
atcaatcagt gaacttttta gcctactcaa agctttgctc caatgcatag gatttatgat 180
tgtggggatt tccagataat ataaatattc aacatgaata ttttaaatta aggcatgaga 240
catttttcct aactgagcat agccatgaac ctctcacgtc tgttcctctg tgtcagtttg 300
tancactgaa tacagcagcc ctcctaaaag tccaggcagt gcacaggtct tgacatgatg 360
aagtgacgtg ttgctatggt gattttgcag ctggccaaat agtcactggt tgattttacc 420
cagcaggaga tttttgcaaa aatttcctgg gtgagagtga aatcaaactc ctattttgnt 480
tctcctctgc aagctgnagt taagatggat taatgagtac ttttagatta attaactctg 540
aagagaaaat gggagaaaag tgaggaaggt tgttggcaga agtcattgct ggaatccttc 600
tgaagggagt actgacttca cttgcaaaga cnagagacta naagacaatg aagttaaact 660
tggcctgtct ctcatatgat agatgctgag agtcaggntc agggaaattt aattctgtca 720
tacgcatatn ggattatgtg gtcatggatt tgttggcact aaccngcctn taatcagnat 780
aagaaaagtg ttttggtaga naaagaaaat tatggcccag aaaaacctgg aanacttgga 840
aaaaatgntn gggggccttg ggtggtggtc tnaaaanacc ccctggggat ntttaaacca 900
aaantgaaga agggaaaaat ntttccccnt ntttttnttt tttgccccct tgggattggn 960
                                                                 970
ttttntttcc
<210> 740
<211> 739
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(739)
<223> n=A, T, C or G
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<212> DNA

<213> Homo sapiens

```
<400> 740
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tgccactagt tettteatte ttecceneca teaateagtg aactttttag eetaeteaaa 120
getttgetee aatgeatagg atttatgatt gtggggattt ccagataata taaatattea 180
acatgaatat tttaaattaa ggcatgagac atttttccta actgagcata gccatgaacc 240
tctcacgtct gttcctctgt gncagtttgt agcactgaat acagcagccc tcctaaaagt 300
ccaggcagtg cacaggtett gacatgatga agtgacgtgt tgetatggtg attttgcage 360
tggccaaata gtcactggtt gattttaccc agcaggagat ttttgcaaaa atttcctggg 420
tgagagtgaa atcaaactcc tattttgttt ctcctctgca agctgnagtt aanatggatt 480
aatgagtact tttagattaa ttaactctga agagaaaatg ggagaaaagn gaggaaggtt 540
gttggcagaa gtcattgctg gaatccttct gaagggagta ctgacttcac ttgcaaagac 600
aagagactan aagacaatga agttaaactt ggcctgtctn tcatatgata gatgcttgag 660
agtacaggnt cagggaaatt ttaattctgn catacgcata ttggattatg tgggtcatgg 720
                                                                  739
ctttqtttqq cncctaacc
<210> 741
<211> 1171
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(1171)
<223> n=A, T, C or G
<400> 741
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attcgcggcc gcgtcgacgg cccttnntgc cactagttct ttcattcttc ccccccatca 120
atcagtgaac tttttagcct actcaaagct ttgctccaat gcataggatt tatgattgtg 180
gggatttcca gataatataa atattcaaca tgaatatttt aaattaaggc atgagacatt 240
tttcctaact gagcatagcc atgaacctct cacgtctgtt cctctgtgtc agtttgtagc 300
actgaataca gcagccctcc taaaagtcca ggcagtgcac aggtcttgac atgatgaagt 360
gacgtgttgc tatggtgatt ttgcagctgg ccaaatagtc actggttgat tttacccagc 420
aggagatttt tgcaaaaatt tcctgggtga gagtgaaatc aaactcctat tttgtttctc 480
ctctgcaagc tgtagttaag aagggattaa tggagtactt tttaagaatt aaattaacct 540
cttgaaagaa gaaaaaatgg gggaagaaaa aaagtggaag ggaaaagggn ttggttttgg 600
gccnaaaaaa aagttccaan tttnggcntt ggggaaaaat tccccntttt ccttggnaaa 660
aggggggnaa ggttaancct tgggaacctt tttccnncct tttnggccca aaaggggaac 720
ccanggggaa agaaccttta ggnaaaggaa acccatttgg gaangggttt naaaaccntt 780
ngggcccccg ggccctcctc caanaaggga aaaaaaaagg cctggaaaan gtaccagggt 840
ttcangggna aaanttaaaa ttcttggcca atancnccat aattgggaat tatggggggg 900
ccatgggctt ttggtttggg cncttaaccc cgcnttttaa attcaaanna aaaaaaagng 960
gtttggaaaa nnaaanaaaa aaaattnaan ggncccnaaa aaaaaccctg gaaaaccttt 1020
ggaaaaaat tngnnggggg gccntttggt tgggggggtt tnaaaaaacc ccctnggggg 1080
ttttttaagc ccaaaagggg gggaggggna aaanggtncc cttnttttt ttttnngccc 1140
                                                                   1171
cccttgggga atggnttant tcanggggcc c
<210> 742
<211> 739
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<220>
<221> misc feature
<222> (1)...(739)
<223> n=A,T,C or G
<400> 742
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tgccactagt tctttcattc ttccccncca tcaatcagtg aactttttag cctactcaaa 120
gctttgctcc aatgcatagg atttatgatt gtggggattt ccagataata taaatattca 180
acatgaatat tttaaattaa ggcatgagac atttttccta actgagcata gccatgaacc 240
tctcacgtct gttcctctgt gncagtttgt agcactgaat acagcagccc tcctaaaagt 300
ccaggcagtg cacaggtctt gacatgatga agtgacgtgt tgctatggtg attttgcagc 360
tggccaaata gtcactggtt gattttaccc agcaggagat ttttgcaaaa atttcctggg 420
tgagagtgaa atcaaactcc tattttgttt ctcctctgca agctgnagtt aanatggatt 480
aatgagtact tttagattaa ttaactctga agagaaaatg ggagaaaagn gaggaaggtt 540
gttggcagaa gtcattgctg gaatccttct gaagggagta ctgacttcac ttgcaaagac 600
aagagactan aagacaatga agttaaactt ggcctgtctn tcatatgata gatgcttgag 660
agtacaggnt cagggaaatt ttaattctgn catacgcata ttggattatg tgggtcatgg 720
                                                                   739
ctttgtttgg cncctaacc
<210> 743
<211> 610
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(610)
<223> n=A,T,C or G
<400> 743
ctgtccttat ttctttagca aaaatttccc aagagaagaa ttgctgggat aatgcacatt 60
taaatttttg atagacattc ccaaatatta tacctgtttt tgagaccttt aattcctgtt 120
gtcaaattgc cctatatatg gagtaataaa cacgatttaa agaaatgagg actaaaaaaa 180
gattatatat aacccaacat aaaggcaacc tettaggegt tgacagaaac tgacaacttt 240
ttatctgtgg gtgcgatcca ttataagtaa cctgagcacc ttatttttc tttttaaact 300
ctaggtagga tacccgaggt ccacaaattt ttcataagaa atatttttc tctgccctat 360
gagattttaa aaaatattat actgcttcaa ttgcatcaaa agaaatggac cctaatatct 420
atgatgaagg atttggagtt agaagacctg agtttcaatt ttggcatggc tgtttgtcta 480
getetgngat ettggacagg teaattgact tggettaate tteteateea tttagnggag 540
acagcaccac tattcacagg actattgncn gaattaccag acaatagcat aggngaaaat 600
                                                                   610
ataangcctt
<210> 744
<211> 127
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(127)
<223> n=A,T,C or G
<400> 744
```

<212> DNA

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ttnacctccc tggaccgggc cccccttccc cgggcggntc ccccgggctg caggaattct 60
gcacgaggga gagagagttn gagagagaga gagagagaga gagagagaga gagananaga 120
gagagag
<210> 745
<211> 458
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(458)
<223> n=A, T, C or G
<400> 745
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ggaagetggg ctacgteetg eccaggteag cettaggtta agggetgeet gggggaggga 120
acttectggg cettegggte tetgtgcact ggggtggete etgtggceca gaatgeeetg 180
gagaagggtc ctactggaag cgaaggtgca gggcagcagg gcctgaggcg caggagctgg 240
tggaggetee cageacaggt egeegeecea gteacateae tgetgatggt ggggggaett 300
ggggagtttc ccccgagaat gggaggtctc acagtccccg tgctgcaatg ctgtcggtgc 360
actgngncng caatgtgctc atggncactt gctttttctc tgtggccccg gccgatttat 420
                                                                   458
ccagcanngc acceptette tneteteegg anaaagee
<210> 746
<211> 893
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(893)
<223> n=A, T, C or G
<400> 746
aagcaggctg gtaccggtcc ggaattcgcg gccgcgtcga cgtggggagt tagctctctg 60
gaccccgtca tagagtaagt catcgataga gcatttgctt gatggggact tccagaaggc 120
canngaaagt cctgccgact tcctggggaa gcccatccgc acgtggggtg agggtcccca 180
natggaagca gctgtgtatg cagggagggg gcagaggctg ctgccaatgg gcatgtccct 240
tacctgaaag ggccacctct ccaggtgaca tgtcctgggg gagccggggc cgtctgctcc 300
ggccagaggc gctcagctca ggccacacca ggcagggcac ctcccaacct ggacaggtgg 360
ggaccaaggt ggccttggac aaaactctct gtgtttgcca agcacccaat cggacacaga 420
gagtcaacca caccccagtc acatggtgtc cacacngcag gggtcaagga ggcccggccc 480
ctcccctca gacgtccctg ggcctctggg agtcagcaag gacgaggacg gcattgccct 540
tcgagacagg aagggagtga cctcctcccg gcggcatcca ggctcngctt ctccggagag 600
gagagggggc tacttgctgg ataaancggc cggggccaca gagaaaaagc aaggtgacca 660
tgagcacctt gcaaacacag tgcacccacc agcatttnag caccngggac tgtgaagacc 720
teceatttet teggggggaa aenegeeeaa ngtteeeee aeenteaeta gtgnattgtg 780
acctgggggn cgggccgacc cctgtngctt gggnnagccc tccncccagg tttctnnggc 840
ngcccnttaa nggnccctng nttggcccct tggccncctt tncgcttttc cca
<210> 747
<211> 738
```

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<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(738)
<223> n=A, T, C or G
<400> 747
gatatecegg gaattegegg eegegtenae gaageaeaga eetgngeeet geteteatgg 60
ggcagactgc catttgtcat tnattactga aggaaaggga tcctcagttt gcttgtggac 120
atttcaaatt tgaggtgaga gttggataag taagaataaa gctgctcttc aaagagatga 180
atatagaaaa agaaacaaga tacagncttg gcagtaaggc tgggaggaag gggaaaaggt 240
aataaagaat gaaagagtga gaaatgtgag caggagctga acacagaaaa gttcagngac 300
agaagcanaa ggagggaaga agggaggagg gtccctttca cagaggctca cgaggatgct 360
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tanaaatttg gatacttact gatcctacat atgtaacagg gagagaaggt gaatttcaaa 480
gcantaaatt gaaaaattgt tcacaatttc atttttaaa aaaagggagc taacagaaga 540
agaggttaat gtggtaatta taggatgnct cttgcgacac atgaatgnat ctggtatcat 600
ctgagtggga ggggagctgt cttcctgacc caaaaggatc ctttcgttan ccngnactta 660
ngtcccaaaa cctcaccacc ttggagaaat natttccttt tgggggtntc attaaancct 720
                                                                   738
tttggncccc gcaaaagc
<210> 748
<211> 647
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(647)
<223> n=A,T,C or G
<400> 748
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aggtcgagag taagacgggc tattagtagt cgcatcggag ttatttgtga aaacctggtt 120
agggcctctg tctccgctgc gctcgcctaa attggtatgg ctcgacttgg aaacacggtt 180
ctaacacgcg ttgttagcgc ccttgctagc atgtgaagga cactggccct accaagaaag 240
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ttagctagat cgacacgcta aaaccaaggg caatcggcgg aaatatagag gcaccaataa 420
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aaaagataaa gtatacatcg tttagcggtc ctcggaagcc ttcggcttta atgccaagga 540
gtcggaagca tcgtcggcga gtaataaact ccatcgcgcc gagactatct acgacgccct 600
                                                                    647
ccttaanatc cgtaaattac tcccggaaag agtatttagg cggctct
<210> 749
<211> 642
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(642)
<223> n=A,T,C or G
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<400> 749
ctntgtggcg gtggntgtct catttgggtg gactttttgg gtcgtaggaa cctggtatgc 60
aggtccgcgg agcgtgggct ctcgtcgtgg atgttggggg ttggtgtgtt gccggttgtt 120
tttggttctg ttgagcgtag tgtgtttgaa ggttagcgtt cgtgtcttgc ttgtggtttg 180
gtgtttaggg cgggtgggga ggttgttgtg tagctgttgt atgtcatatt gttggtgttg 240
ctgccctgtg ctgtttgtcc ttggttattg tggttgttac cccgcctgtg tggaagtgtt 300
gtggcagggc gggaatttaa gtgggagagt tgtgggaccc gtggttgttg ttacgttgct 360
gcttttgtcg tgggcggtgg cggcgcgtct gataattaga attggatacg gagtgtataa 420
tacttctagt aaatggggac ctagtgcttg acttcccgga atagggatct atgcgaagtc 480
cttaggatag tctttgataa gtttaacgcc cacgacccta aaattataca cgattagacg 540
cataacgact cctccaggaa agataaagaa tctcacatat agaacgggac cccatacacg 600
tcggatagga aacaagagaa ctaattttng ttaaaaagac tt
<210> 750
<211> 639
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(639)
<223> n=A,T,C or G
<400> 750
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gtatagatgc cgattggtcc cgacgagcgt cacgataaat tcggtagttt cgcccttttt 120
agaaggeget agtactegga actteactte ateteggtag tttactttgg egtatatage 180
cttctccctc gaagactagc cgtcacattc gttccctagg aatcgtttct gcccctaaga 240
atccgagagc gagatcccga aactagagga accttagaag agtcgtattt ccacaaggac 300
cccacagtca ttccgggaaa atccctagga ccatacggtt aggattcccc cggaacccgg 360
agcaaagctc atgatttccc acaccgcgag agcgcctata accctatccc atttcttcgg 420
gttatcgagg atattacgat caagccgaga gaaccgctag aaccgctttc ttcgctttct 480
cacggaacct ataagtagaa agagaaactc aggtcttaag ggggcgcttc ggctaacgaa 540
acttctactt acgaagaga tatctagaca ttaagtcata aaaatccact acgcacctcg 600
                                                                   639
tgtacgatat catcgggagc ggttcataga cggtgtccg
<210> 751
<211> 637
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(637)
<223> n=A,T,C or G
<400> 751
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aggcagetet gageeceece ecceeceece ecceecenee ecceeceta ggnggttggg 120
aanacggtgg atacctaaat cgagtgngtt cattaaaagt agttgattac nccctaaaat 180
aanaanaggg cttcgtcggg anaaatcggt aagganaagt ctttntggca tcataanaat 240
actggctcgg gtcctaanat ntttaaggng gtcnccgagg gtnttcatac cgataanaaa 300
cgttttccta tcggcaacgg gcttacctga gggnggactt ctcncggngc ggngattnan 360
```

<211> 721

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acgaanacgt agaggattnc cgntacttnt tganatcacn cgtatcatac ttgtaagcat 420
aattntcctg aaaagtgtta taanaatacg cncgcatatt cgctttttcg tcctagggat 480
gcttaaatgg cgatactgct atagcgggtg agcgttggtt ctcgagnaan aaagcgtgtc 540
ctaatgcgtc taaggnttta aggncgttgg tttaaaaata nccttagaaa cctcgaggcg 600
gatactggtt tntttttaac gaaacaaagc acccenn
<210> 752
<211> 644
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(644)
<223> n=A, T, C or G
<400> 752
tntgtggcgg tggtgctcat ttgggtggat ttttgggtcg taggaacctg gtatgaggtc 60
ttgcgagttg ttggtgtgtc ctgtcgttcg gtggttccct tttgagttga gtttgtcctt 120
tgaggttgtt agctgctgtt cgtttgtgtt cgtgtagtgc tttgggttga gagggttatg 180
gtggtggtta cggtgtattg tcgcccgtgg tcgcggggtt ggggtggtcg tcggttttgt 240
ggttcatagt agtcttctgc gttcggtggt gcgggtttgg gtgagtagtt tcgttcttgg 300
atgtcccatt gacccgccat aatctaagta agggttagta gaaacctctc cccgatagac 360
acaaccgtcg tccactaaag acctcgcctc tgatttttaa aaggacccga aaaacatccc 420
ttcaacggaa aaaacggaaa aaaagtcagc gaattcaaag aagccacggg agagaaaaaa 480
gaactaaagt tagtccgtca ttatatgtct cctcggagga ggaagcggcg gtggcggaaa 540
atgaggcggt aagaaagacg acctctatcg gcggcttang ccctaaaagg gcgatacctt 600
                                                                   644
acgggatgat aaggacccta ggacgcctcc ttctcggatc gtcc
<210> 753
<211> 635
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(635)
<223> n=A,T,C or G
<400> 753
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aatcagctcg accececec eccececet ecgaagcaga geecaaceca aagtecaceg 120
actacccgag taaactctcg gagggtagaa taagaaggag taggtcctag ccaatagaag 180
tagttccgag ccgttaggac agcggacgga acattnaaga aagagcctat attagggagg 240
aagtaacgtt cctctttcgg agctctttaa ggggtagtcc cagaacaagg gaagaggacc 300
cgtcggctat tgcccgtcga tacgggctct cacggngagc ctaggttcga ggatagggcc 360
gctcgtaaaa ttatacggtt tccgagaaac gcttccgtag accgggtcct aaatcgtccg 420
gagtattngg agagggatcc ttcggaccct agggacagag agaggagaac ggaggttaca 480
ggaggagaac gtntcctcnc tagttttctt tangtcgaaa aatttcttac cgatagggtt 540
cctagggtcg gngaatttac ggttcgaaaa acggtagtnc ctaanggntg ntattngggg 600
                                                                   635
tagtatcggg tcgtttacaa ntcgtccgtc ttntg
<210> 754
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<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(721)
<223> n=A, T, C or G
<400> 754
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ttnccttgct ttatatatcc agcagcaaaa caaaattgtt ctgcngggct ataaaatttg 120
gettgtgagt entgtacaca actcaggagt gtgacacage taccagettt cetectaact 180
ctcaagggaa gaaaattcaa gttctgtcta ggctcactct gtaaagtggg aaacttgctg 240
gttttgtagg cttttttcc ccttcttcc ctctctcagc ttctccctgc ttctcagaan 300
atggagttgt gatgcctgca acttaccaaa tttatctatg aatcagattc cagtgggaga 360
cccctaaagc agagggagaa taaggagttc tccccatgat ggaaaatatc caaagacaag 420
gtttcatgga gcaaagaatt ctggctagat ttggtttgta agtggatccc tccccactgc 480
gtgtacactt tatctgtctc tttgcttctt ccccaccctc tttcccagct ctctctctgt 540
ctctctttg ntcccctgac cctttttct tcccantgca tactttttn tttccctttt 600
ttaatettet atantettaa neetaeeaan gggeeetent gannaattin teaeeeetga 660
ataggggatt ctntangccc tgagaatttc nttatcanaa aaatatttt ttaaagcatt 720
                                                                  721
<210> 755
<211> 721
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(721)
<223> n=A,T,C or G
<400> 755
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ttnccttgct ttatatatcc agcagcaaaa caaaattgtt ctgcngggct ataaaatttg 120
gcttgtgagt cntgtacaca actcaggagt gtgacacagc taccagcttt cctcctaact 180
ctcaagggaa gaaaattcaa gttctgtcta ggctcactct gtaaagtggg aaacttgctg 240
gttttgtagg cttttttcc ccttcttcc ctctctcagc ttctccctgc ttctcagaan 300
atggagttgt gatgcctgca acttaccaaa tttatctatg aatcagattc cagtgggaga 360
cccctaaagc agagggagaa taaggagttc tccccatgat ggaaaatatc caaagacaag 420
gtttcatgga gcaaagaatt ctggctagat ttggtttgta agtggatccc tccccactgc 480
gtgtacactt tatctgtctc tttgcttctt ccccaccctc tttcccagct ctctctctgt 540
ctctctcttg ntcccctgac cctttttct tcccantgca tactttttn tttccctttt 600
ttaatcttct atantcttaa neetaecaan gggeeetent gannaatttn teaeceetga 660
ataggggatt ctntangccc tgagaatttc nttatcanaa aaatatttt ttaaagcatt 720
                                                                   721
а
<210> 756
<211> 873
<212> DNA
<213> Homo sapiens
<220>
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<221> misc feature
<222> (1)...(873)
<223> n=A,T,C or G
<400> 756
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ggaaactgtc agcctgtctc tttcactttg ggcaagtgaa agcaaagacg tccagtccta 120
tcagcaatta ggctgaaagt caacgccaag ctggcgggca agggctggtc tgagtagagg 180
ttccctaggc aggcaagaga gagactccca ctcgatactc ccagctcggc aactgcctga 240
atgccaatga gcactcatta taacccgccc tattttatag gatttaattt tacacttcag 300
gcttaatcag tctgaaagtt aaactgacag tgttaagtta cggaatcaat gacatttagg 360
ctttatgact ttgtagctga atatctatgg gctatatttc cattctaaca gtgatatcct 420
gttccagaat ctcattcttt ggtgatggca ctttctagtg gagcagtcat ggtaacagtc 480
cacacccatt accatgtggg tgctttacag catactgacg gaaggactga ggagccaccg 540
gagcaggagt tcctctcagg gaggacgctg acacttccac agctgcctan gtatgggcac 600
ctgatgccaa cgaanaaccc aaagcgctct cccttccaga tggaagctgc cccacactgg 660
gctgacagca tctggagctg ctctggctca aatcccggaa tcgcacanct cctancgggg 720
gcgtttanag atcctcnggg ccagctaccg accacttttg acaagggnct taggagcgat 780
aactagnctg gcgcgttaca cncggatgga acgtcttgga cttgagacct cttgggggan 840
atggcncccc caaataantt gggaaaantn ggg
<210> 757
<211> 782
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(782)
<223> n=A,T,C or G
<400> 757
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ggatttgaga ccaggagaca gctccagatg ctgtcagccc agtgctgggg gcaggcttcc 120
atctgtgaag tggagaggcg ctttgggctt cttcgttggc atcaggtgcc catacctagg 180
gcagctgtgg aagtgtcagc gtcctccctg agaggaactc ctgctccggt ggctcctcag 240
teetteegte agtatgetgt aaageaceca catggtaatg ggtgnggaet ggtaceatga 300
ctgntccctt aaaaggtggc cttcccnaag aaaggagaat tcttggacna gggatttcac 360
ttgnttagaa atgggaaaaa ttacccatta gaattttcgn ttccaaggcn tnaagnccta 420
aaaggccttt gattcccgaa ccttaaccct gggcagttaa cctttcaaac gggataaacc 480
ctgangggga aaatnaaatc ctttaaaaaa gggggggttt naaggagggc tctttggctt 540
tcaggcantt gccaacctgg gaaattcana ggggaagtnt ttttttttgc ctgcctaggg 600
aacctttact taaacnaacc cttgnccccc catttggggt tgactttcan cctaattgct 660
gaaaggaccg ggccgntttt gntttccttt gncccaaagg naaanaaacg ggtgccantt 720
cccangggat tanttcccga aaatttggnn aatttttntt tgnaactttt tgggtttttt 780
                                                                   782
CC
<210> 758
<211> 647
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
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<222> (1)...(647)
<223> n=A,T,C or G
<400> 758
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gggaagagcg ccgtcggtcc gagtacagta tggagtagta tagtcttcgc gccttctcgg 120
geggegggge tattetetee aaaggeagag gteeetagte gaeetegete eeetaggtta 180
ggaacagccg tcgaatattt taggttcgtc gaggctttct tccgagctct acgcctaagt 240
agetecgega geaaagtate ggteatttte eectateeat eacteceeta agtaegeete 300
attattccgg aaggcaagag gccagcattc ctccttagag tagagggtag gtacctccgt 360
cgcgtgccgc gaaagggcag agcttcgtgt cttccctccg cagcagctta acggtctacg 420
taggcgttct cgatcttttc acgggaatcg gggtccggga gggcggcgga aaacgtcgac 480
gteteggtea eegteacege eeegaacaac tageggettt eegettteaa etgaggaace 540
ccgcacccct cattagcgct tacgaaatcg gggangtgat tgcgccaatt cgttagcctt 600
                                                                   647
cgataattat tctctattag cggtcctatc tcgcgctttc gatttat
<210> 759
<211> 657
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(657)
<223> n=A,T,C or G
<400> 759
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gggctctata gaaagcctct tgtctttaga tacgggcttt ctggtccttc gttctggaag 120
tgtagtagta ggtactgcgg gaaggcgaag agtcctttca aggacgattt acttaagttg 180
gcttattcta tagttccttc gggacataag gtcggtacga tctatactgc gtgggaagct 240
gataggttgg gacttaaggc gaataagaag gaggcggcgg aggtcgcgat taccgcagag 300
atattattta cggcggccgc gggtaccgcg ggtcatgcgg aaattttctg aggttcttgg 360
attectaaga tegeteeegt egagtataet agegaegaae gtaagagtge eeteacaaga 420
accggtacaa actcaagaag aagttcccat taagcatcgt aagaaacggt aggacgagga 480
cggtaagaag taatcggaga aaggatccta gtngttacga agaagcatcg ttnagctact 540
ttgcgctacc gtttatattt agacgtgttc cgtccttctc cgtgtttana aaaaaggttt 600
attccgacgg gagacttagg cgaatggagg gttccgcggt tganaatcgg ancgggg
<210> 760
<211> 644
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(644)
<223> n=A,T,C or G
<400> 760
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ggaaaagaag taagcctcga agcctatctc cgaccgtatt tatttcgcag aagacggaac 120
tacggacgtc gttaaccccg agtagccccc gtaagaaagg actaaagcga atggaaaagt 180
cgggaattcc ggcggagggg cggcgattac tgaaaggagt aagagtaaga ctattgcgat 240
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acttgaggcg ttccctctta aaaggcaccc gaaacactct attaaaaaac acccgaagaa 300
gaacaactca tgcgatcggc cgtgtgcagc cgtcaatagt aaagagagcc atgaaccatg 360
ccatccttag accaattagg atgaagaaga ggaggaagat gaggaccaaa ccctacccac 420
teggaaaacc eegcaegage eteegaacaa aateegggaa ttaaaaegge ggeecaette 480
cgcactctcg tagcgcggac cgaatagaaa accggaaact acagctaaag ggtcctttcc 540
ggcctgttat ctacccaccc gcaatccgat cctcccccc cctcgtccaa aaaccctaac 600
                                                                   644
ctctgcggca acattagagc agaaggagag ggcgatccct tgan
<210> 761
<211> 647
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(647)
<223> n=A, T, C or G
<400> 761
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ggcgggtact ctctgggata atcggtataa gtgttgtaaa attgggggta agagaaagtt 120
tcattataag aagtggaagc acgagccggg gtgtttagtc gttaatatta agaccggttt 180
ttgttgtact tatatagctt gcgcgtgggg aggcaataag aaacattgcg tttcgaggcc 240
ggatgcgggg aaccetette ggggtetaga gegeegeate tgcaaaataa ggaetaetga 300
cgccgctcat aacgtactca acaatgagtc ggcctgcatt aagatttcgg cgaagaaccg 360
tactgcgtct actgatagta tattgcattg atagcggcat gagctttatc acgtgtcgtt 420
ttcgggttgt aagaagggag ttaagtcgat cttcgaggaa gaagagaccc caaataaaaa 480
atgactcaaa aaaacctaga agaaacacga cgaaaggaaa aagaacgtta aaactagtag 540
ctcttcggan gagtagcctt agtagggtaa gtcctccgtg cgtactgtcc taaggtttgg 600
                                                                   647
atagcgcggt tgaatagacg gtcacgcgtc agaaggtaaa aanccgg
<210> 762
<211> 628
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(628)
<223> n=A, T, C or G
<400> 762
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tgtgttccct ttattcgctt gtattaatat ttgcgtagtg gattaaacaa atacttggtg 120
ttgactgtca gtcttagagg actgactaga agtagttttc atttggggct caggaaatac 180
ctactttata tttctagcta attaggaaag tcatttttca gttaggttgg tgttttggtt 240
caggcactcg ctagctagat gacctaacat gctacttaat ttctgagtgt ttgtgtccat 300
ccctgtagga ttgttgcggg gttaaatgaa attgtgtata tttgtaaagc atttacctca 360
gtgcccagac tgtgacagag tagattatta ggcttgctct tatttctgtg attaaattta 420
gtgtcagatt agcaacctat agctacttct aaagctgctg ctgctttctt tgtttagggt 480
taggaagaaa catgctggac agtttgccaa atgagagtta catgatgtgg cttgtgggaa 540
cattctaact tggaacttgc ccatttccag gactttgngg ttcanagatt tttggggata 600
                                                                    628
gatgtaaggg ttaaaaaaaa cngaaaac
```

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<210> 763
<211> 147
<212> DNA
<213> Homo sapiens
<220>
<221> misc_feature
<222> (1)...(147)
<223> n=A,T,C or G
<400> 763
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gaaaagctaa ctggataact tacagcatgt ttctgccaat aatctcttan aacaggcctc 120
tttttttat gcacaccacc ttcnggc
<210> 764
<211> 146
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(146)
<223> n=A,T,C or G
<400> 764
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agagttaggg ggactgttag aacagagaaa ganatcatgg ggttgggttt gagtctgatg 120
nnnaactggt gccgnntgct cagtat
<210> 765
<211> 129
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(129)
<223> n=A,T,C or G
<400> 765
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ccagtgtggg nggaattcca ttgtgttggg gcaggaggng ctttgngtac ngtgcggctg 120
                                                                    129
nagaggcgg
<210> 766
<211> 175
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(175)
<223> n=A, T, C or G
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acattctgtg ngtgatgagg tgtatattcg anganctcta tcnccanagt actct
<210> 767
<211> 602
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(602)
<223> n=A, T, C or G
<400> 767
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cctggtttgt tttcagtgtt taatcctatt agtatcagca ggatataggt caggatatca 120
ggtgcagaac ctgtggaatc agccaatttg gcttgctcat ttactttaat aaggtcccat 180
aatgagtgag agtacaaagt tcaagccctg ttgagggtct gcattaaact ctcagaagta 240
tttagagtgt gccaggagcc gcgaaggtct ggttcgggtg gtggcgggaa ctgtattaga 300
gtgctaggca cggcgcgaca aagtctgtcc aacccaaaac ggtgctgagg cgttgggtgt 360
gagetecagt acteagaaaa geateteage aggtaeteaa eagateetea ggggettggg 420
ggcccagcac tggcagtgag ggcatgaaag acataaaagg gcactacctg tgggtatttt 480
ctgttctcca aggaggaagt agcaaaaatt aggacgctgg aatatcctat gttgtagcaa 540
teccagaaca actgatgete aacaaatace acacaaaaca aatttttaa aatttaatet 600
                                                                   602
ta
<210> 768
<211> 671
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(671)
<223> n=A,T,C or G
<400> 768
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tegeggeneg egtegacaaa aatactgeta aagtaatatt titatagatg actatttgee 120
ttggggccag gaaaagcagc tggagttatt cacttagtac catttttaca tactaacttt 180
geetttteea tgettgettg atgeggettg cageactgaa gaacagttte aattgetage 240
caaccagaga gcatgatcaa accaaacaag ttccctgttt caggaaaaac aggttttagg 300
taactgaagg gttaccagtt actgattcca caatcttctc tgtaaaanat ttctgcctat 360
tatgcagact gggcggcttt aaanntggta aaactatnaa atacccatac aatattttaa 420
nggggccccn ttatnaagct tttcaggcct tcccctttcc atagcattgg tgggatacaa 480
gaaaccttta aacagcaacn agctatcnag gcccaaaagg aaagtaattn tgatttttta 540
nagattccgn aacgaaaaaa tggctgggtt caaatacnac cttcttttta aaatggnttc 600
cttattaaac ntttttttt tttaatttta ccccatggtc ntgatnttng ngcttccgcc 660
                                                                    671
canaaaatng n
```

<210> 769

ن

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<211> 877
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(877)
<223> n=A,T,C or G
<400> 769
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ngggggaatt cgcggccgcg tcgacctcta tacctttgnt catgcagctt cctctgactg 120
ggtttgttct tcacttggct aacccctctt ttacttaagc acaccttgaa cattccctcc 180
ttccccattt ccccgcagng cccctaatgg acatacttct gaataacaca ggtggtattc 240
cttccttgtt ggaacctcct ggaggaagag acagatgatt aacaaatcct tccatcaacc 300
cctttgacca tgacatcaac agtgctccaa attatggggt accgtattag cctatgtcta 360
tettgateag aateettace teggtgtatt gaaattatet atttegtgee tgeetettta 420
aagtcagggt ttgccttatc tattgtctaa caccatgcag taggtaacat gcagtaggaa 480
acatggcatt aaattatttg ggttcaaatc ccagttatgg tgtgtaaatg cctaccaggc 540
cgtgaggcac ctgctaagca ggttgcacgc atcatttgaa ttcacaccac ccttttgcaa 600
tagaacagat aggcaacaga ggctcatttg ggctaaagga tttgatggag gggaagtgcc 660
aggattecea ecaaggeete anggeeeagg tecanggace atgtetgttg tgacaactgg 720
agtgcatttc atatcccctn ctctgngggg naaggtccct cncgnggaga acnnttaaaa 780
caatcatntc tngggggntt aatgettett neceeagtgt ggtneaetge ngeeaegagt 840
cccanccact agtcccangt ctgtcatgaa ccanccc
<210> 770
<211> 874
<212> DNA
<213> Homo sapiens
<220>
<221> misc feature
<222> (1)...(874)
<223> n=A,T,C or G
<400> 770
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gaattcgcgg ccgcgtcgac cttttcaaag gttaacttat ttaattatca cannngcaac 120
ccgatgagta ggtaacagta ttttactgat aggtaatcta aagaaggagg ctaaataaat 180
tgcccaattt cgaacagtga gaggaagaat taggattgaa acacatatag tggcttcaga 240
atctgtaacc ctcacgatgc cactactact tctttcagaa taccctttgc ctatctattc 300
tgttcctatg tcatcaaatt atacttactt taaaaagtat ttgtctttat tatttttaaa 360
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<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Homo sapiens



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525 515 520 Glu Asp Arg Asn Gly Arg Asp Glu Met Asp Ile Glu Leu His Asp Val 535 Ser Pro Ile Thr Arg His Pro Leu Gln Ala Leu Phe Ile Trp Ala Ile Leu Gln Asn Lys Lys Glu Leu Ser Lys Val Ile Trp Glu Gln Thr Arg 570 Gly Cys Thr Leu Ala Ala Leu Gly Ala Ser Lys Leu Leu Lys Thr Leu 585 Ala Lys Val Lys Asn Asp Ile Asn Ala Ala Gly Glu Ser Glu Glu Leu Ala Asn Glu Tyr Glu Thr Arg Ala Val Glu Leu Phe Thr Glu Cys Tyr 610 Ser Ser Asp Glu Asp Leu Ala Glu Gln Leu Leu Val Tyr Ser Cys Glu 635 630 Ala Trp Gly Gly Ser Asn Cys Leu Glu Leu Ala Val Glu Ala Thr Asp 650 Gln His Phe Ile Ala Gln Pro Gly Val Gln Asn Phe Leu Ser Lys Gln Trp Tyr Gly Glu Ile Ser Arg Asp Thr Lys Asn Trp Lys Ile Ile Leu 680 Cys Leu Phe Ile Ile Pro Leu Val Gly Cys Gly Phe Val Ser Phe Arg 690 Lys Lys Pro Val Asp Lys His Lys Lys Leu Leu Trp Tyr Tyr Val Ala 715 710 Phe Phe Thr Ser Pro Phe Val Val Phe Ser Trp Asn Val Val Phe Tyr 725 Ile Ala Phe Leu Leu Phe Ala Tyr Val Leu Leu Met Asp Phe His 745 Ser Val Pro His Pro Pro Glu Leu Val Leu Tyr Ser Leu Val Phe Val 760 Leu Phe Cys Asp Glu Val Arg Gln Trp Tyr Val Asn Gly Val Asn Tyr 770 Phe Thr Asp Leu Trp Asn Val Met Asp Thr Leu Gly Leu Phe Tyr Phe 795 Ile Ala Gly Ile Val Phe Arg Leu His Ser Ser Asn Lys Ser Ser Leu

815 810 805 Tyr Ser Gly Arg Val Ile Phe Cys Leu Asp Tyr Ile Ile Phe Thr Leu 820 Arg Leu Ile His Ile Phe Thr Val Ser Arg Asn Leu Gly Pro Lys Ile 840 Ile Met Leu Gln Arg Met Leu Ile Asp Val Phe Phe Leu Phe Leu 855 Phe Ala Xaa Trp Met Val Ala Phe Gly Val Ala Arg Gln Gly Ile Leu 870 Arg Gln Asn Glu Gln Arg Trp Arg Trp Ile Phe Arg Ser Val Ile Tyr 890 Glu Pro Tyr Leu Ala Met Phe Gly Gln Val Pro Ser Asp Val Asp Gly Thr Thr Tyr Asp Phe Ala His Cys Thr Phe Thr Gly Asn Glu Ser Lys Pro Leu Cys Val Glu Leu Asp Glu His Asn Leu Pro Arg Phe Pro Glu 935 Trp Ile Thr Ile Pro Leu Val Cys Ile Tyr Met Leu Ser Thr Asn Ile Leu Leu Val Asn Leu Leu Val Ala Met Phe Gly Tyr Thr Val Gly Thr 970 Val Gln Glu Asn Asn Asp Gln Val Trp Lys Phe Gln Arg Tyr Phe Leu 985 Val Gln Glu Tyr Cys Ser Arg Leu Asn Ile Pro Phe Pro Phe Ile Val Phe Ala Tyr Phe Tyr Met Val Val Lys Lys Cys Phe Lys Cys Cys 1010 Lys Glu Lys Asn Met Glu Ser Ser Val Cys Cys Phe Lys Asn Glu Asp 1030 1025 Asn Glu Thr Leu Ala Trp Glu Gly Val Met Lys Glu Asn Tyr Leu Val 1050 Lys Ile Asn Thr Lys Ala Asn Asp Thr Ser Glu Glu Met Arg His Arg 1065 1060 Phe Arg Gln Leu Asp Thr Lys Leu Asn Asp Leu Lys Gly Leu Leu Lys 1085 1080 Glu Ile Ala Asn Lys Ile Lys

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<212> PRT <213> Homo sapiens

<400> 818

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Val Asn Phe Ile Gln Ala Asn Phe Lys Lys Arg Glu Cys Val Phe Phe 35 40 45

Thr Lys Asp Ser Lys Ala Thr Glu Asn Val Cys Lys Cys Gly Tyr Ala
50 55 60

Gln Ser Gln His Met Glu Gly Thr Gln Ile Asn Gln Ser Glu Lys Trp 65 70 75 80

Asn Tyr Lys Lys His Thr Lys Glu Phe Pro Thr Asp Ala Phe Gly Asp 85 90 95

Ile Gln Phe Glu Thr Leu Gly Lys Lys Gly Lys Tyr Ile Arg Leu Ser 100 105 110

Cys Asp Thr Asp Ala Glu Ile Leu Tyr Glu Leu Leu Thr Gln His Trp 115 120 125

His Leu Lys Thr Pro Asn Leu Val Ile Ser Val Thr Gly Gly Ala Lys 130 135 140

Asn Phe Ala Leu Lys Pro Arg Met Arg Lys Ile Phe Ser Arg Leu Ile 145 150 155 160

Tyr Ile Ala Gln Ser Lys Gly Ala Trp Ile Leu Thr Gly Gly Thr His 165 170 175

Tyr Gly Leu Met Lys Tyr Ile Gly Glu Val Val Arg Asp Asn Thr Ile 180 185 190

Ser Arg Ser Ser Glu Glu Asn Ile Val Ala Ile Gly Ile Ala Ala Trp 195 200 205

Gly Met Val Ser Asn Arg Asp Thr Leu Ile Arg Asn Cys Asp Ala Glu 210 215 220

Gly Tyr Phe Leu Ala Gln Tyr Leu Met Asp Asp Phe Thr Arg Asp Pro 225 230 235 240

Leu Tyr Ile Leu Asp Asn Asn His Thr His Leu Leu Leu Val Asp Asn 245 250 255

Gly Cys His Gly His Pro Thr Val Glu Ala Lys Leu Arg Asn Gln Leu 260 265 270

Glu Lys Tyr Ile Ser Glu Arg Thr Ile Gln Asp Ser Asn Tyr Gly Gly 280 Lys Ile Pro Ile Val Cys Phe Ala Gln Gly Gly Lys Glu Thr Leu 295 Lys Ala Ile Asn Thr Ser Ile Lys Asn Lys Ile Pro Cys Val Val Val 310 Glu Gly Ser Gly Gln Ile Ala Asp Val Ile Ala Ser Leu Val Glu Val 330 325 Glu Asp Ala Leu Thr Ser Ser Ala Val Lys Glu Lys Leu Val Arg Phe Leu Pro Arg Thr Val Ser Arg Leu Pro Glu Glu Glu Thr Glu Ser Trp Ile Lys Trp Leu Lys Glu Ile Leu Glu Cys Ser His Leu Leu Thr Val Ile Lys Met Glu Glu Ala Gly Asp Glu Ile Val Ser Asn Ala Ile Ser Tyr Ala Leu Tyr Lys Ala Phe Ser Thr Ser Glu Gln Asp Lys Asp Asn 405 Trp Asn Gly Gln Leu Lys Leu Leu Leu Glu Trp Asn Gln Leu Asp Leu 425 Ala Asn Asp Glu Ile Phe Thr Asn Asp Arg Arg Trp Glu Ser Ala Asp 440 Leu Gln Glu Val Met Phe Thr Ala Leu Ile Lys Asp Arg Pro Lys Phe 455 450 Val Arg Leu Phe Leu Glu Asn Gly Leu Asn Leu Arg Lys Phe Leu Thr 470 465 His Asp Val Leu Thr Glu Leu Phe Ser Asn His Phe Ser Thr Leu Val 485 Tyr Arg Asn Leu Gln Ile Ala Lys Asn Ser Tyr Asn Asp Ala Leu Leu 505 500 Thr Phe Val Trp Lys Leu Val Ala Asn Phe Arg Arg Gly Phe Arg Lys 520 Glu Asp Arg Asn Gly Arg Asp Glu Met Asp Ile Glu Leu His Asp Val 530 Ser Pro Ile Thr Arg His Pro Leu Gln Ala Leu Phe Ile Trp Ala Ile 555 550 545

Leu Gln Asn Lys Lys Glu Leu Ser Lys Val Ile Trp Glu Gln Thr Arg 565 570 575

Gly Cys Thr Leu Ala Ala Leu Gly Ala Ser Lys Leu Leu Lys Thr Leu 580 585 590

Ala Lys Val Lys Asn Asp Ile Asn Ala Ala Gly Glu Ser Glu Glu Leu 595 600 605

Ala Asn Glu Tyr Glu Thr Arg Ala Val Glu Leu Phe Thr Glu Cys Tyr 610 615 620

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<212> PRT

<213> Homo sapien

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Gly Gly Gly Ser Pro Thr Val His Ile Gly Pro Thr Ala Phe Leu Gly 35 40 45

Leu Gly Val Val Asp Asn Asn Gly Asn Gly Ala Arg Val Gln Arg Val 50 55 60

Val Gly Ser Ala Pro Ala Ala Ser Leu Gly Ile Ser Thr Gly Asp Val 65 70 75 80

Ile Thr Ala Val Asp Gly Ala Pro Ile Asn Ser Ala Thr Ala Met Ala

Asp Ala Leu Asn Gly His His Pro Gly Asp Val Ile Ser Val Asn Trp 100 105 110

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Gly Pro Pro Ala 130

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Leu Ala Glu Gly Pro Pro Ala Glu Phe Met Ile Arg Glu Lys Phe Ala

135

His Cys Thr Val Leu Thr Ile Ala His Arg Leu Asn Thr Ile Ile Asp 145 150 155 160

Ser Asp Lys Ile Met Val Leu Asp Ser Gly Arg Leu Lys Glu Tyr Asp 165 170 175

Glu Pro Tyr Val Leu Leu Gln Asn Lys Glu Ser Leu Phe Tyr Lys Met 180 185 190

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<211> 357

<212> PRT

<213> Homo sapiens

<400> 826

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Leu Pro Ser Asp Gly Lys Lys Met Val His Val Gln Asp Phe Thr Ala 35 40 45

Phe Trp Asp Lys Ala Ser Glu Thr Pro Thr Leu Gln Gly Leu Ser Phe 50 55 60

Thr Val Arg Pro Gly Glu Leu Leu Ala Val Val Gly Pro Val Gly Ala 65 70 75 80

Gly Lys Ser Ser Leu Leu Ser Ala Val Leu Gly Glu Leu Ala Pro Ser 85 90 95

His Gly Leu Val Ser Val His Gly Arg Ile Ala Tyr Val Ser Gln Gln
100 105 110

Pro Trp Val Phe Ser Gly Thr Leu Arg Ser Asn Ile Leu Phe Gly Lys 115 120 125

Lys Tyr Glu Lys Glu Arg Tyr Glu Lys Val Ile Lys Ala Cys Ala Leu 130 135 140

Lys Lys Asp Leu Gln Leu Leu Glu Asp Gly Asp Leu Thr Val Ile Gly

145					150					155					160
Asp	Arg	Gly	Thr	Thr 165	Leu	Ser	Gly	Gly	Gln 170	Lys	Ala	Arg	Val	Asn 175	Leu
Ala	Arg	Ala	Val 180	Tyr	Gln	Asp	Ala	Asp 185	Ile	Tyr	Leu	Leu	Asp 190	Asp	Pro
Leu	Ser	Ala 195	Val	Asp	Ala	Glu	Val 200	Ser	Arg	His	Leu	Phe 205	Glu	Leu	Cys
Ile	Cys 210	Gln	Ile	Leu	His	Glu 215	Lys	Ile	Thr	Ile	Leu 220	Val	Thr	His	Gln
Leu 225	Gln	Tyr	Leu	Lys	Ala 230	Ala	Ser	Gln	Ile	Leu 235	Ile	Leu	Lys	Asp	Gly 240
Lys	Met	Val	Gln	Lys 245	Gly	Thr	Tyr	Thr	Glu 250	Phe	Leu	Lys	Ser	Gly 255	Ile
Asp	Phe	Gly	Ser 260	Leu	Leu	Lys	Lys	Asp 265	Asn	Glu	Glu	Ser	Glu 270	Gln	Pro
Pro	Val	Pro 275	Gly	Thr	Pro	Thr	Leu 280	Arg	Asn	Arg	Thr	Phe 285	Ser	Glu	Ser
Ser	Val 290	Trp	Ser	Gln	Gln	Ser 295	Ser	Arg	Pro	Ser	Leu 300	Lys	Asp	Gly	Ala
Leu 305	Glu	Ser	Gln	Asp	Thr 310	Glu	Asn	Val	Pro	Val 315	Thr	Leu	Ser	Glu	Glu 320
Asn	Arg	Ser	Glu	Gly 325	Lys	Val	Gly	Phe	Gln 330	Ala	Tyr	Lys	Asn	Tyr 335	Phe
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Ser Gly Arg Leu Lys Glu Tyr Asp Glu Pro Tyr Val Le	eu Leu Gln Asn 15
Lys Glu Ser Leu Phe Tyr Lys Met Val Gln Gln Leu Gl 50 55 60	y Lys Ala Glu
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coccagging toggacocto ciccoagint octificate actinged caccining	400
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Ile Ala Gly Gln Ile Lys Leu Pro Thr Val His Ile Gly Pro Thr Ala 35 40 45

Phe Leu Gly Leu Gly Val Val Asp Asn Asn Gly Asn Gly Ala Arg Val 50 55 60

Gln Arg Val Val Gly Ser Ala Pro Ala Ala Ser Leu Gly Ile Ser Thr 65 70 75 80

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Ala Met Ala Asp Ala Leu Asn Gly His His Pro Gly Asp Val Ile Ser 100 105 - 110

Val Thr Trp Gln Thr Lys Ser Gly Gly Thr Arg Thr Gly Asn Val Thr 115 120 125

Leu Ala Glu Gly Pro Pro Ala Glu Phe Met His Gly Pro Gln Val Leu 130 135 140

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Gly Val Arg Leu Glu Gly Val Asp Arg Pro Pro Thr Leu Pro Ser Gln 165 170 175

Gly Ser Gly Trp Pro Cys Ser His Ser Leu Ser Gly Cys His Leu Met 180 185 190

Ala Asp Gly Ala Lys Ala Leu Gly Lys Ala Asp Gly Pro Trp Pro Tyr 195 200 205

Leu Phe Val Arg Arg Thr Asp Val Pro Cys Pro Ala Ala Ser Glu Val 210 215 220

Gly Gly Cys Ala Pro Ser Ser Trp Arg Ala Leu Ala Glu Val Thr Gly 225 230 235 240

Cys Ser Leu Gly Pro Leu Gly Leu Ala Gln His Ala Gln Ala Ser Val 245 250 255

Leu Leu Cys Tyr Lys Trp Ser His Ile Gly Glu Thr Ser Ser His

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85 90 95	
Leu Tyr His Pro Ser Met Phe Cys Ala Gly Gly Gly Gln Xaa Gln Xaa 100 105 110	
Asp Ser Cys Asn Gly Asp Ser Gly Gly Pro Leu Ile Cys Asn Gly Tyr	
115 120 125	
Leu Gln Gly Leu Val Ser Phe Gly Lys Ala Pro Cys Gly Gln Val Gly	
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Ala Val Asp Gly Ala Gly Gln Lys Lys Asp Arg Ala Trp Leu Arg Cys 50 55 60	
Pro Glu Ala Val Ala Gly Phe Pro Leu Gly Ser Asp Cys Arg Glu Gly 65 70 75 80	
Gly Arg Gln Gly Cys Gly Gly Ser Asp Asp Glu Asp Asp Leu Gly Val	
Ala Pro Gly Leu Ala Pro Ala Trp Ala Leu Thr Gln Pro Pro Ser Gln	

Ser Pro (	01	100	C1 ~	cor	Lou	Pro	105	Thr	Pro	Ser	Ser	110 Ile	Trp	Pro	
	115					120					125				
Gln Trp	Val				135					140					
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Leu Gly	Val	Val			55					60					
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Ile Ala Gly Gln Ile Lys Leu Pro Thr Val His Ile Gly Pro Thr Ala 35 40 45

Phe Leu Gly Leu Gly Val Val Asp Asn Asn Gly Asn Gly Ala Arg Val 50 60

Gln Arg Val Val Gly Ser Ala Pro Ala Ala Ser Leu Gly Ile Ser Thr 65 70 75 80

Gly Asp Val Ile Thr Ala Val Asp Gly Ala Pro Ile Asn Ser Ala Thr 85 90 95

Ala Met Ala Asp Ala Leu Asn Gly His His Pro Gly Asp Val Ile Ser 100 105 110

Val Thr Trp Gln Thr Lys Ser Gly Gly Thr Arg Thr Gly Asn Val Thr 115 120 125

Leu Ala Glu Gly Pro Pro Ala Glu Phe Ile Thr Tyr Val Pro Pro Leu 130 135 140

Leu Leu Glu Val Gly Val Glu Glu Lys Phe Met Thr Met Val Leu Gly 145 150 155 160

Ile Gly Pro Val Leu Gly Leu Val Cys Val Pro Leu Leu Gly Ser Ala 165 170 175

Ser Asp His Trp Arg Gly Arg Tyr Gly Arg Arg Arg Pro Phe Ile Trp 180 185 190

Ala Leu Ser Leu Gly Ile Leu Leu Ser Leu Phe Leu Ile Pro Arg Ala 195 200 205

Gly Trp Leu Ala Gly Leu Leu Cys Pro Asp Pro Arg Pro Leu Glu Leu 210 215 220

Ala Leu Leu Ile Leu Gly Val Gly Leu Leu Asp Phe Cys Gly Gln Val 225 230 235 240

Cys Phe Thr Pro Leu Glu Ala Leu Leu Ser Asp Leu Phe Arg Asp Pro 245 250 255

Asp His Cys Arg Gln Ala Tyr Ser Val Tyr Ala Phe Met Ile Ser Leu 260 265 270 Gly Gly Cys Leu Gly Tyr Leu Leu Pro Ala Ile Asp Trp Asp Thr Ser 280 275 Ala Leu Ala Pro Tyr Leu Gly Thr Gln Glu Glu Cys Leu Phe Gly Leu 295 Leu Thr Leu Ile Phe Leu Thr Cys Val Ala Ala Thr Leu Leu Val Ala 320 315 310 Glu Glu Ala Ala Leu Gly Pro Thr Glu Pro Ala Glu Gly Leu Ser Ala 330 325 Pro Ser Leu Ser Pro His Cys Cys Pro Cys Arg Ala Arg Leu Ala Phe 345 Arg Asn Leu Gly Ala Leu Leu Pro Arg Leu His Gln Leu Cys Cys Arg 355 Met Pro Arg Thr Leu Arg Arg Leu Phe Val Ala Glu Leu Cys Ser Trp 375 Met Ala Leu Met Thr Phe Thr Leu Phe Tyr Thr Asp Phe Val Gly Glu 395 390 <210> 853 <211> 20 <212> PRT <213> Homo sapiens <400> 853 Leu Leu Pro Pro Pro Pro Ala Leu Cys Gly Ala Ser Ala Cys Asp Val Ser Val Arg Val <210> 854 <211> 60 <212> DNA <213> Homo sapiens <400> 854 ctgctcccac ctccacccgc gctctgcggg gcctctgcct gtgatgtctc cgtacgtgtg 60 <210> 855 <211> 10 <212> PRT <213> Homo sapiens <400> 855 Ala Ser Ala Cys Asp Val Ser Val Arg Val

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Asn Phe Cys Ser Phe Ser Arg Asp Gly Val Ser Leu Cys Cys Ser Gly 85 90 95

Trp Ser Lys Thr Pro Gly Leu Gln Gln Ser Ala Cys Leu Gly Leu Pro 100 105 - 110

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Arg Ala Lys Pro Tyr Gln Met Leu Gln Gly Leu Gly Thr Leu Arg Pro 35 40 45

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Ser Leu Glu Pro Gly Arg Leu Arg Glu Glu Asn Arg Leu Asn Pro Gly

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Ala Gln Trp Leu Thr Pro Val Ile Pro Ala Leu Trp Glu Ala Lys Val 50 55 60

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Gln Ser Gln Thr Val Ser Asp Ala Ala Gly Ala Gly Asp Thr Glu Thr 35 40 45

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Ser Cys Arg Asn Gly Leu Ala Ser Lys Trp Arg Gln Ala Asp Pro Ser

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<213> Homo sapiens

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Cys Ser His Ile Arg Gly Pro Ile Lys Ile Ala Arg Asn Lys Phe Pro 40

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Val Pro Gln Tyr Ala Pro Arg Val Leu Thr Gln Ala Ser Asn Pro Val 50 55 60

Val Cys Thr Gln Pro Lys Ser Pro Ser Gly Thr Val Cys Thr Ser Lys 65 70 75 80

Thr Lys Lys Ala Leu Cys Ile Thr Leu Thr Leu Gly Thr Phe Leu Val 85 90 95

Gly Ala Ala Leu Ala Ala Gly Leu Leu Trp Lys Phe Met Gly Ser Lys 100 105 110

Cys Ser Asn Ser Gly Ile Glu Cys Asp Ser Ser Gly Thr Cys Ile Asn 115 120 125

Pro Ser Asn Trp Cys Asp Gly Val Ser His Cys Pro Gly Gly Glu Asp 130 135 140

Glu Asn Arg Cys Val Arg Leu Tyr Gly Pro Asn Phe Ile Leu Gln Met 145 150 155 160

Tyr Ser Ser Gln Arg Lys Ser Trp His Pro Val Cys Gln Asp Asp Trp 165 170 175

Asn Glu Asn Tyr Gly Arg Ala Ala Cys Arg Asp Met Gly Tyr Lys Asn 180 185 190

Asn Phe Tyr Ser Ser Gln Gly Ile Val Asp Asp Ser Gly Ser Thr Ser 195 200 205

Phe Met Lys Leu Asn Thr Ser Ala Gly Asn Val Asp Ile Tyr Lys Lys 210 215 220

Leu Tyr His Ser Asp Ala Cys Ser Ser Lys Ala Val Val Ser Leu Arg 225 230 235 240 Cys Leu Ala Cys Gly Val Asn Leu Asn Ser Ser Arg Gln Ser Arg Ile 245 Val Gly Gly Glu Ser Ala Leu Pro Gly Ala Trp Pro Trp Gln Val Ser Leu His Val Gln Asn Val His Val Cys Gly Gly Ser Ile Ile Thr Pro 280 Glu Trp Ile Val Thr Ala Ala His Cys Val Glu Lys Pro Leu Asn Asn Pro Trp His Trp Thr Ala Phe Ala Gly Ile Leu Arg Gln Ser Phe Met 310 Phe Tyr Gly Ala Gly Tyr Gln Val Gln Lys Val Ile Ser His Pro Asn Tyr Asp Ser Lys Thr Lys Asn Asn Asp Ile Ala Leu Met Lys Leu Gln Lys Pro Leu Thr Phe Asn Asp Leu Val Lys Pro Val Cys Leu Pro Asn Pro Gly Met Met Leu Gln Pro Glu Gln Leu Cys Trp Ile Ser Gly Trp 375 370 Gly Ala Thr Glu Glu Lys Gly Lys Thr Ser Glu Val Leu Asn Ala Ala 390 Lys Val Leu Leu Ile Glu Thr Gln Arg Cys Asn Ser Arg Tyr Val Tyr 405 Asp Asn Leu Ile Thr Pro Ala Met Ile Cys Ala Gly Phe Leu Gln Gly 425 Asn Val Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Thr Ser 435 Asn Asn Ile Trp Trp Leu Ile Gly Asp Thr Ser Trp Gly Ser Gly 455 Cys Ala Lys Ala Tyr Arg Pro Gly Val Tyr Gly Asn Val Met Val Phe 475 470

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834

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Arg Asn His Phe Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn 225 230 235 240

Asp Glu Trp Thr Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val Ser 245 250 255

Ala Glu Ala Trp Gly Arg Ala Asp Cys Gly Phe Thr Ser Glu Ser Tyr 260 265 270

Gln Gln Gly Val Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly 275 280 285

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Asp Gln Ser Tyr Gly Leu Phe Trp Tyr Lys Gln Pro Ser Ser Gly Glu
50 55 60

Met Ile Phe Leu Ile Tyr Gln Gly Ser Tyr Asp Glu Gln Asn Ala Thr 65 70 75 80

Glu Gly Arg Tyr Ser Leu Asn Phe Gln Lys Ala Arg Lys Ser Ala Asn 85 90 95

Leu Val Ile Ser Ala Ser Gln Leu Gly Asp Ser Ala Met Tyr Phe Cys 100 105 110

Ala Met Arg Glu Gly Ala Gly Gly Gly Asn Lys Leu Thr Phe Gly Thr 115 120 125

Gly Thr Gln Leu Lys Val Glu Leu Asn Ile Gln Asn Pro Asp Pro Ala 130 135 140

Val Tyr Gln Leu Arg Asp Ser Lys Ser Ser Asp Lys Ser Val Cys Leu

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45

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330

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Asp Leu Thr Glu Ile Asp Ser Ser Gly Asp Glu Gln Ser Leu Leu Glu

Leu Ile Ile Thr Thr Lys Lys Arg Giu Ala Arg Gln Ile Leu Asp Gln

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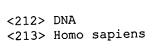
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Thr Lys Ile Gly Val Ala Ala Val Val Arg Gly Ala Ala Leu Met Ala 145 150 150 155

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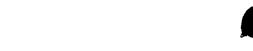
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325

340



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Cys Val Arg Leu Tyr Gly Ser Asn Phe Ile Leu Gln Val Tyr Ser Ser Gln Arg Lys Ser Trp His Pro Val Cys Gln Asp Asp Trp Asn Glu Asn Tyr Gly Arg Ala Ala Cys Arg Asp Met Gly Tyr Lys Asn Asn Phe Tyr Ser Ser Gln Gly Ile Val Asp Asp Ser Gly Ser Thr Ser Phe Met Lys Leu Asn Thr Ser Ala Gly Asn Val Asp Ile Tyr Lys Lys Leu Tyr His Ser Asp Ala Cys Ser Ser Lys Ala Val Val Ser Leu Arg Cys Ile Ala Cys Gly Val Asn Leu Asn Ser Ser Arg Gln Ser Arg Ile Val Gly Gly Glu Ser Ala Leu Pro Gly Ala Trp Pro Trp Gln Val Ser Leu His Val Gln Asn Val His Val Cys Gly Gly Ser Ile Ile Thr Pro Glu Trp Ile Val Thr Ala Ala His Cys Val Glu Lys Pro Leu Asn Asn Pro Trp His Trp Thr Ala Phe Ala Gly Ile Leu Arg Gln Ser Phe Met Phe Tyr Gly Ala Gly Tyr Gln Val Glu Lys Val Ile Ser His Pro Asn Tyr Asp Ser Lys Thr Lys Asn Asn Asp Ile Ala Leu Met Lys Leu Gln Lys Pro Leu Thr Phe Asn Asp Leu Val Lys Pro Val Cys Leu Pro Asn Pro Gly Met Met Leu Gln Pro Glu Gln Leu Cys Trp Ile Ser Gly Trp Gly Ala Thr Glu Glu Lys Gly Lys Thr Ser Glu Val Leu Asn Ala Ala Lys Val Leu Leu Ile Glu Thr Gln Arg Cys Asn Ser Arg Tyr Val Tyr Asp Asn Leu Ile Thr Pro Ala Met Ile Cys Ala Gly Phe Leu Gln Gly Asn Val Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Thr Ser Lys Asn Asn Ile Trp Trp Leu Ile Gly Asp Thr Ser Trp Gly Ser Gly Cys Ala Lys Ala Tyr Arg Pro Gly Val Tyr Gly Asn Val Met Val Phe Thr Asp Trp Ile Tyr Arg Gln Met Arg Ala Asp Gly